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Some Comments on Tamil Nadu: An Economic Appraisal 1989

Statement of the Workshop

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EDITORIAL - SOME HIGHLIGHTS

I General Economic Scene

State

Planning Commission

The Planning Commission is undergoing some recasting. Since the elected government resigned in February, the Chairmanship has changed twice—with the Ex-chief Secretary and the Adviser (Economic Affairs) holding the office in succession, and now with the election of a new government, the chief secretary, Mr. T.V. Antony, has been transferred to the commission and made its chairman. Whether there will be any revision of the Annual Plan and Draft Eighth Plan remains to be seen.

Climate and Prices

June saw the south west monsoon advancing to cover the southern districts of the state, relieving a hot summer which May represented. Madras received very sharp rainfall on one day and also showers during the second half of the month, so that the climate has been mild and cool at nights. CSO's abstract of statistics for January 1991 and subsequent months has not approved as yet and so there is no report on the price facet of the state economy. The Commissioner, Civil Supplies reports in early June that prices of vegetables have doubled. This is mainly attributed to the assassination of Mr. Rajiv Gandhi in late May which brought all life and markets to a standstill. The government reports that this was also used as an occasion for profiteering. The government states that it is planning a crash programme for bulk procurement from the major producing centres in and outside the state and to market the vegetables through some 100 retail centres in Madras and district headquarters. The Cooperatives are to be entrusted with retail sales. Now that the elections are over and a new government is in position the suffering of housewives and consumers in paying enormous prices for vegetables should end and prices should attain normal levels—at the start of the new month

(July 1991) (after 4 weeks) this is yet to be made effective.

Power

The power front in the state in June had two important plus points. First, because of the rains, the hydel reservoirs received large inflows during the month. The continuing rains in the catchment areas will help to make up this year's lag in the reservoir which was by the middle of the month 606 MU compared to last year's 689 MU and the total capacity of 2200 MU. The grid demand was declining because of the reduced intake by farmers receiving good rains. The other plus point is that the coal stock position of the thermal plants has improved at 1 lakh tonnes by mid June, (the AP Chief Minister has promised further 1 lakh tonnes from Singereni) and with the restriction of thermal generation to the minimum making it possible to further build up the coal stocks. On this basis, TNEB decided to remove state wide load shedding, while still maintaining the 25 per cent cut on power consumption and 30 per cent cut on demand of HT industries. The other piece of good news is the announcement by TNEB and ONGC that the state's first gas based turbine using the cauvery natural gas will go on stream in September. This is a 6 month slippage (see Vol XXI p209) of 10 MW station coming up at Kovilkalappol. In view of the large revenue deficit of Rs. 673 crores for this year which TNEB faces, it has announced a heavy increase on new consumers. This is a development change for new connections (Rs 500 for single phase connection, Rs. 1000 for three phase similar charge for LT,HT, commercial, research, educational institutes and street lights. This is needed but will add to the inflationary pressure. Kalpakkam's first unit which has been shut down from early February is expected to start by the end of July which will make active its capacity of 235MW. TNEB also announces that Tuticorin's fourth unit (210 MW) will be commissioned by December and that the first unit will be ready by June 1992. The North Madras station is being built according to schedule and its first unit will be commissioned by June 1993 and the second unit by December 1993. Power will be in a tight fit for the state in the VIII Plan and will have to be used economically avoiding power intensive industrial units. The Union Public Investment Board has in June approved a Rs. 1163.27 crores new mine (providing 4 million tonnes) and a linked thermal station of 420 MW.

At the national level, the Ministry of Power reports that electricity generation is increasing at 9 5 per cent in May 1991 against May 1990, with thermal generation forming 75 per cent of it. This imbalance in thermal as against hydel generation should be corrected over the VIII Plan. The supply of power in most states was normal, with the heavy rains in Kerala and Maharashtra, moving North. With regard to atomic energy, the government reports a number of problems. For one the Soviet agency had blocked the detailed projects for Kayamkulam and Mangalore, so that NTPC executing the projects states that instead of completing them by the VIII Plan end, they may slip into the IX Plan. The Soviets states that the delay is due to NTPC not opening the letters of credit as per schedule. Second, Mangalore (420 MW), Kayamkulam (420 MW), North Kamarajpuram thermal (1000 MW) and Godavari (400 MW) are being held up by the Department of Environment on environment and rehabi-

litation grounds. Third, there are delay also in 4 nuclear power projects—Rajasthan, Narora, Kakrapur, Mangalore which will cost the government more than Rs. 1200 crores. Finally the government states that because gas based turbines are not available internationally (partly because of the Gulf war) the gas based, power projects are held up and gas will continue to be flared wastefully. This is an occasion when we should use our engineering skills and R&D in BHEL and other centres to develop gas based turbines indigenously The power ministry is pressing for the ban on bilateral aid in power to be lifted because it enables faster development of the project, at lower cost. Experience shows that neither is the project speeded up as a result of bilateral tie up nor is it cheaper than that of indigenous power equipment that producers charge.

Water

A major development in the water area was the decision announced on May 25 of the Cauvery Water Disputes Tribunal directing Karnataka to release water from its reservoirs so as to ensure that 205 tmc of water was available in Tamil Nadu's Mettur dam in a year from June to May to be effective from July 1. This follows the Supreme Court directive to the Tribunal to consider Tamil Nadu's prayer for interim relief (see Vol XXI p271). The Tribunal also ordained that Karnataka is not to increase its area under irrigation by Cauvery waters beyond the existing 11.2 lakh acres, besides ensuring that the water released to Tamil Nadu is regulated on a week basis. The tribunal has asked Tamil Nadu to release 6 tmcft of water to the union territory of Pondicherry. The monsoon, as noted earlier, was moving inland, and by June had reached Telingana and the Rayalaseema, Karnataka and Tamil Nadu. The unusually heavy rain on June 4 & 5 gave Madras 6 tmcft in 24 hours and 1 month water supply, sending the storage to the Red Hill reservoirs to 1879 mcft. Also an inflow of 52,360 cusecs into Mettur at the same time and the rains in Tiruchi, Kamarajar, Thanjavur etc. meant that the water position in the state for both drinking and irrigation is satisfactory for this part of the year. Work on the Telugu Ganga is being speeded with the AP government taking some positive initiatives.

Housing

HUDCO announced that Rs. 8000 crores have been set apart for housing in the southern states, of which Rs. 800 crores is being spent in Tamil Nadu. Of 170 building centres in the country for training masons and other construction workers, centres had come up at Maduravayal, Auroville, Gandhigram and Tiruchi and is being completed in Madurai. About half the state allotment is for housing and the other for acquiring land and the infrastructure needed. The VIII Plan target for the South is 35 lakh houses, of which the Tamil Nadu's will be 11 lakhs. This is a sound approach of encouraging private capital and funds to flow into the house building activity.

Cheap liquor scheme

The first programme action of the new government was the announcement of the discontinuance of sale of country liquor with effect from July 16. This was one of the major pledges of the party now forming the government. The abolition of the cheap liquor scheme will entail a revenue loss of Rs. 322 crores for the rest of this financial year, which it is

stated will be made up by "other administrative avenue's. This is aimed at countering the cheap liquor which has lowered the living levels of the poor sectors. To back up this action, the state level prohibition propoganda committee is being reconstituted and reactivated, and a campaign to educate the public on the evils of liquor is to be one of its major tasks.

Union

VIII Plan

In June, the Deputy Chairman and members of the Planning Commission submitted their resignation to the new Prime Minister. The Deputy Chairman presented to the Prime Minister the preparatory work done by the Commission on the VIII Plan on the basis of a 6 per cent rate of growth calling for an outlay of Rs. 325,000 crores in the public sector. The government appointed as the new Deputy Chairman of the Planning Commission, Mr. Pranab Mukherji and the other members of the commission are being appointed. The Deputy Chairman states that the first priority for the commission is to complete the VIII Plan.

Prices

The inflation rate for May recorded a rise of 1 per cent, the whole sale price index standing at 194.3 per cent on June 1. The annual rate of inflation, on a point to point basis, was 10.8 per cent compared to 11.1 per cent reported in the last issue for the 12 month period ending 27 April 1991. This decline is due to a statistical quirk involving a higher base for the period, as explained in the last issue. The index of primary articles registered a rise of 0.2 per cent, food prices 0.4 per cent including cereals by 0.5 per cent, pulses 0.2 per cent, fruits by 1.5 per cent and fish and meat by 1.76 per cent—for the week ending June 1, 1991. Among manufactures, food products rose by 1.6 per cent, including sugar, gur and khandasari by 2.6 per cent and oil cakes by 2.5 per cent during that period. RBI reports that notes in circulation continued to fall (by Rs. 195.40 crores) during the week ended May 31, notes in the banking department rising by a small Rs. 4.29 crores. This slowing money supply has made contribution to the damping down of inflation in May.

Stock Exchange

The Stock Exchange seems to be unaffected by the immediate problems facing the economy—the BOP crunch, the large debt both internal and external, high fiscal deficits. Share prices are currently 50 per cent higher than last year, the Bombay Stock Exchange sensitive index for 30 scrips averaged 1248.13 on June 7, 1991 against 802.45 in June 1990. The BSE national index was also up by 50 per cent. The Madras Stock Exchange recorded a better trend during mid June, with share prices recovering their lost ground. The Calcutta exchange recorded a decidedly bullish trend. The Delhi share market moved up briskly and Ahmedabad exhibited cheerful conditions. These stock exchange trends are criticised as not reflecting the grave economic crisis facing the country —that its activities are based on the good start of the monsoon and good farm output expected : which might help industrial production and the new government and giving the economy the needed sense of direction and stability. It may well be that the Stock Exchange dealers,/ workers etc

have a better appreciation of the future than the chambers of commerce, economists etc. The building up of discipline in the exchanges is being emphasised in the Stock and Exchange Board of India (SEBI) recommending that the company Law Board penalise companies/ delaying share transfers and for this purpose, the Registrar of Companies carry out surprise checks on companies delaying the share transfers. This will put a check on this group of malpractices. SEBI has also set forth criteria for grading prospects of public issues on a scale of one to ten to guide merchant bankers. This will also facilitate the tasks of genuine investors. The Ministry of Finance has increased pressure on Stock Exchanges to tighten their regulations, trade and reporting practices and has authorised SEBI and the ministry officials to conduct annual inspections for this purpose. One problem facing the government both for its economic viability and for its negotiations with the IMF and World Bank is the huge revenue deficit during 1991-92, which is estimated at Rs. 17.000 crores.

Economy

May recorded several developments in the economy. First, there was and continues to be a deal of excitement over the government selling 20 tonnes of confiscated gold (out of an estimated 80 tonnes) through the State Bank of India in the Zurich market on a spot basis and buying it 6 months forward, which was using the gold as collateral for raising a short term loan of $240 million. The interest on this is the Libor rate. The government has no option on the matter as its low foreign exchange reserve (covering 3 weeks of imports) would have been completely exhausted, if the gold had not been sold/mortgaged, to meet our debt servicing obligations. It is normal practice for any government —USSR, Iran, China to sell its gold holdings to meet its foreign exchange needs. The problem is that there is still a foreign exchange debt service of $ 700 million to be met which will involve the sale of a further 30 tonnes of gold, which will have to come out of the official reserve. Here the IMF loan can be of help. The government has sent a letter of intent to IMF for a loan and is negotiating the details—the amount and conditionalities. It is also negotiating a bridge loan to meet immediately foreign exchange needs. Second, the government projects a 5 per cent growth for 1990—91 on the basis of a normal monsoon, stable oil prices, moderate inflation, sustained agricultural and industrial production and supporting infrastructure facilities. This appraisal of the past year should be placed along the NCAER 4th survey of consumption trends for 1989-90 which reveals the sale of consumer durables, such as refrigerators, quartz wrist watches, VCRs, motorcycles, have increased sharply showing "the heavy marketing investments during the year in these products, their easy availability, the rising prosperity of the consumer households". Black and white TV sales rose by 60 per cent over the previous year, while colour TV sets increased by 10 per cent, the spurt in black and white TV sets being mainly in rural areas (increasing from 31 per cent to 44 per cent) along with increasing rural market shares in sales of table radios, sewing machinery and pedestal fans, pressure cookers, wrist watches. The data shows that the East has moved slowest towards a consumerist society, the West showing the fastest increase, with North and South also increasing the rural shares but at a lower pace and for a different cluster of goods. The South's

main share was in mixies, grinders, B&W TVs, table radios, ceiling fans moped and motor cycles, electric stoves and irons, the North's major share was room heaters, RCV, gas stoves, pressure cookers, colour TVs, scooters, moulded brief cases. The survey draws the conclusion "the data questions the basic presumption of what are necessaries and luxuries when we see the figures of consumption among low income group as well as in rural areas." This interesting survey and conclusion needs a detailed analysis of the methodology used and the sample chosen. Third, the World Bank has demanded changes in the accounting procedures of the development finance institutions as a condition for sanctioning the financial sector loan of $ 1 billion. The substance of what is demanded is in the national interest—that is, disclosure of the sick industries portfolio and bad debts and change in accounting from accrual basis to cash basis, but it is to be regretted that the World Bank has been allowed to dictate these terms. This is a bad precedent which the Bank will follow up. Fourth, the RBI relaxed cash margin for manufactures—exporters of finished leather products, chemicals and pharmaceuticals, engineering goods, games and name boards (see previous volume). It is also considering relaxing the margin being required for opening letters of credit on rupee paid imports as there is no foreign exchange outgo on this. Fifth, the 3 days downpour in Maharashtra resulted in Rs. 100 crore worth of damage, filed by industries with insurance companies; the fertiliser subsidy for this year is likely to exceed Rs. 6000 crores against Rs. 4800 crores provided in 1991-92 budget which is a major inflationary factor. Finally, the government has rightly decided to initiate steps to set up a technology mission on cotton, as unlike recent years when the cotton crop was abundant, (above forecasts), this year there is a smaller crop, large exports, the cotton shortage faced by mills will accentuate, the cotton crisis for which the technology mission may show the lines of meeting the crisis for now and the future, as it has done for oil seeds. The other product facing a problem is sugar, where despite a 9.8 per cent increase in production in 1990—91, sugar prices have jumped by 2.2 per cent between October 1990 and January 1991. On this the remedy is to ensure that levy sugar is available to the poor and allow free sugar prices to rise as the only means of not only balancing demand and availability but also restraining luxury consumption of sugar by 5 star hotels and the black marketeers—of this water guzzling crop.

Industry

CSO reports (quick estimates) that the industrial growth index for February 1991 at 222.7 was 7.3 per cent higher than that for February 1990 so that for the first 11 months of 1990-91 industrial growth rose by 8.5 per cent compared to the 7 per cent recorded by the first 11 months of 1989-90. During this period, April-February, 1990-91 the index for manufacturing (which accounts for 77.10 per cent of the total index) rose by 9.6 per cent compared to the 11 months 1989-90 rise by 6.3 per cent. As noted earlier this satisfactory record of the industrial sector leads to the official view that together with a similar performance in agriculture, 1990-91 recorded an overall growth of the economy of 5 per cent which seems reasonable. The Chief Commissioner of Income Tax says because of well considered tax planning, the contribution of the private sector to the corporate tax revenue "is very negligible"

and that the level of the revenue of Rs. 5000 crores under this head comes from the public sector firms like BHEL, Mahandgar Telephone Nigam, NTPC, IOC and ONGC, with the share of the private companies being near non existent. The top 25 corporate giants in the private sector do not pay any corporate tax. He also drew attention to the estimate of black money of Rs. 300,000 crores and regretted that "even nationalised banks have been made full use to generate black money',, 51 per cent of demand drafts purchased in India against tax payment of Rs. 1 lakh related to unaccounted transactions and involve a revenue loss to government of Rs. 400 crores per annum. On individual industries, the plastic industry is reported to be adopting a new strategy involving (a) dovetailing its priorities with those of the government, and (b) pushing exports so that it would be able to obtain foreign exchange for its essential imports. This would also counter the popular impression that the petro chemical industry causes a net drain on foreign exchange resources which it does as if it is carefully managed, it may generate a small supply. The priority for plastics and polymers in the coming years is in the area of packaging of edible oils (with NDDB), plastics furniture reduce deforestation, plastic crates for foods and vegetable, flexible laminated processed foods and engineering plastics for key industries like electronics and automobiles. It is expected that from this year the industry will once more expand and earn profits, following from IPL's plans for the Nagotham complex and the new capacity being created in the private sector. Will the supply situation of PVC, polystyrene and HOPE improve and become positive this year and the following years? On this depends also the further prospects of the industry.

Public Sector enterprises

In May, SCOPE (the Standing Conference of Public Enterprises) at the meeting of its board identified 25 profit making public sector units which are suitable to attract ready buyers of their equity, if the government decides to disinvest. The names of the units have been conveyed to the appropriate ministries. With the disinvestment a fund is to be created for (a) undertaking modernizations, (b) expansion of public sector programmes, and c) nursing back sick public sector units to health. This would also distance government dealing with the day to day management of such undertakings in which it has no competence. While this last is desirable, the start should be with disinvestment and selling off of loss making units which will bring in funds because of their valuable real estate. The disinvestment of profit making units raises general issues or the place of public sector in a system of planned development which needs further consideration.

National Production Front

Steel

In June, the Joint Plant Committee issued the long delayed guidelines for the distribution of the iron and steel materials based on the sound principle of a direct relationship between the consumer and producer, eliminating the middlemen and conformity with the government over policy on iron and steel. The new guidelines are important for expanding the compact industry group which has a better representation of actual consumers. They also make special provision for sick units, their approved rehabilitation programmes are to be treated as programmes of new

units and for potentially sick units are to be assisted by a sub committee. The guidelines are clear and sound and how they are carried out will decide on their effectiveness and relevance. A CEI study shows that in 1988-89 SAIL held the top position among engineering plants and TISCO in the matter of exports. It is presumed that their leads continues in the subsequent two years, though the absolute amounts involved, Rs 6777 crores in SAIL turnover and Rs. 83 in TISCO export, are not impressive. SAIL is also reported to have imported coking coal for its captive power plants, which is a criminal waste at a time when the country faces a foreign exchange. This wastage is now becoming serious as it is continuing even after the instruction to stop it. Further, it is reported to have built up a large coking coal reserve (4.8 lakh tonnes in April 1991) which is far in excess of its requirement. The time has come now to stop its import of coking coal to induce some responsibility and caution in its use both by SAIL and TISCO. Finally, from the end of May steel prices have been falling which may be due to consumer resistance to prevailing steel prices which may also be related to political uncertainty which should end with the new government. On the other hand mini steel plants are facing a crisis due to inputs shortage. The extent to which the curb on imported scrap their, main raw material has lead to decreased supply was referred to in earlier issues and for the short run atleast calls for some relaxation along with our steel plants providing this important input to mini steel plants.

Crude

In June ONGC has submitted an action plan to the ministry for adjusting oil production in Bombay offshore and repair of wells. This takes account of the World Bank warning that unless this kind of adjustment is made, Bombay offshore will lose 130 to 150 million tonnes of oil over a period of time. Hence the plan based on the recommendations of the Dasgupta committee involves closing down defaulting wells and repairing them, which will involve loss of 14 million tonnes in the VIII Plan (and 2.5 million tonnes in 1991–92). The repair of the 58 wells will start increasing our production in the IX Plan. ONGC also reports that it struck gas in the south Bassein gas field off the Gujarat coast in a new structure, BS12. The use of gas will be looking up in the future with the decision by the government to transfer all assets associated with the marketing of gas to GAIL, leaving only production and processing of gas with ONGC and OIL. This not only ends a a long drawn out controversy over the asset transfers but also should see its effective use and reduction of the flaring of gas. This should also reduce the alarming import bill of crude and petrol product by the end of the IX Plan to the tune of Rs. 18,000 crores.

Coal

The June news on coal is both encouraging and sombre—Coal production in 1990—91 has attained the target and gone beyond it at 210 million tonnes. The sombre aspect is the provision that at the end of the VIII Plan in 1994—95 coal production will have to increase to 310 million tonnes. Not onty is the attainment of this order of increase (100 million tonnes) in the text 3 years a difficult task, but the 35 million tonnes expected from Singereni is highly doubtful of attainment, given its uncertain labour relations.

Non Ferrous

Development in the non ferrous metals field were of a mixed nature. On the one hand the primary producers of aluminium are worried over mounting stocks at 16,000 tonnes in April 1991 rising to 50,000 tonnes in March 1992 while the government is pressing them to produce more mainly for exports. There are some issues here : one is that in the absence of buyers the producers will be incurring losses on their stock : the other is aluminium is a power intensive industry and in a power short economy the building up of stocks seems inadvisable. Hence the producers must be allowed to produce with the electricity supplied to them with the various cuts, as captive power is expensive and will push up export prices. On the other hand NALCO reports a record turnover in 1990-91 at Rs. 884.54 crores and its foreign exchange earnings have crossed Rs. 1000 crores—which are creditable, despite the fire and cyclone setbacks it suffered. This may enable MMTC to push the sale of aluminium through a series of counter trade deals following its first shipments to Germany and UK. HZL also reports a record production of 8000 tonnes of Zinc and 25,000 tonnes of Lead in May, on the basis of which there are prospects of its new Chanderiya plant with a capacity of 70,000 tonnes of Zinc and 35,000 tonnes of Lead, enabling HZL to produce 100,000 tonnes of Zinc and save foreign exchange to the tune of Rs. 100 crores this year. The negative element in June is that overseas suppliers of non ferrous metals are insisting that the irreversable letters of credit opened by Indian units be further guaranteed by foreign banks. In view of this, it is time that overseas orders for the metal be reduced as much as possible.

Agricultural Production

News in June on farming operations are positive and encouraging. On the one hand, the IMD forecast of a normal monsoon, with a negative side, has enabled state governments and large farmers to work out contingency plans to make up for any shortfall in water availability. On the other hand, the kharif operations which starts with pre monsoon rains which have been adequate has enabled kharif sowings and transplantation to be undertaken normally in Kerala, AP, West Bengal, J&K. The sowing of coarse cereals has picked up with the onset of the monoon. On this basis the kharif target of 103 million tonnes seems attainable, despite the elections having delayed nursery paddy seedlings raising in Bihar and east UP. In Punjab and Haryana sowing operations are expected to pick up at June end when the monsoon arrives there. The sowing of jute was complete in West Bengal and Assam, but due to the inadequate pre monsoon rains in the region, there is a small shortfall in the area covered. The sugarcane crop is reported to be doing well. The water reservoirs have levels 40 per cent higher than last year. The 1990—91 foodgrain is placed at between 176.5 and 177.5 million tonnes, a record production for the third successive year—with 101 million tonnes from kharif and 76 million tonnes from rabi. Rice at 75 million tonnes owes its record because of the fertiliser consumption and the special rice production programme in Assam, Bihar, MP, Orissa, Rajasthan and Tamil Nadu leading. Oilseeds are also a record at 19.23 million tonnes. Sugarcane

records 233.5 million tonnes, cotton 102.3 lakh bales, and jute 77 lakh bales. Procurement of cereals has been slow due to elections and the disturbances. The targets for 1991—92 for foodgrains has been fixed at 182 million tonnes and to attain this fertiliser supply is being ensured. A study by S. P. Gupta forecasts India's population at 100 crores and derived from it foodgrains at 240 million tonnes by the end of IX Plan 2000—which looks realistic.

Foreign Trade

The Ministry of Commerce announces that in 1990—91 exports rose by 17.5 percent at Rs. 35,527.28 crores and for 1991—92 has fixed export target of Rs. 40,200 crores, an increase of 20 per cent. Engineering exports are proposed to be raised to Rs. 5940 crores (from 1990—92 Rs. 4500 crores) an increase of 32 per cent, computer software from Rs. 300 crores to Rs. 700 crores an increase of 133 per cent, electronic hardware from Rs. 800 crores to Rs. 900 crores, an increase of 12.5 per cent, textiles from Rs. 8665 crores to Rs. 10,350 crores, an increase of 19.4 per cent, gems and jewellery because of recession from Rs. 510 crores to Rs. 520 crores an increase of 17.3 per cent, agricultural products from Rs. 2700 crores to Rs. 3050 crores, an increase of 13 per cent, marine products from Rs. 850 crores to Rs. 1050 crores an increase of 23.5 per cent, minerals and ores Rs. 1980 crores to Rs. 2160 crores, an increase of 9.1 per cent, leather exports from Rs 3000 crores to Rs. 3700 crores an increase of 27.7 per cent, chemicals at Rs. 4000 crores, handicraft at Rs. 1200 crores, petroleum products at Rs. 900 crores and sports goods at Rs. 100 crores. What has given some cheer in the current year, that the first month, April, shows a surplus of exports over imports by Rs. 135 crores compared to a deficit of Rs. 764 crores in 1990. This surplus is due mainly to the sharp drop in imports by 12.7 per cent to Rs. 2815 crores and a rise in exports by 19.9 per cent to Rs. 2950 crores. As the import compression policy (the high cash margin imposed by RBI when opening letter of credit) explained in the last issue will have a real impact in reducing imports later in the year—after June/July which will be reinforced by the delay in purchase of crude and deferred payment arrangements for bulk imports, the surplus stands on rather slender foundations. Further, the invisibles scenario is not encouraging with tourism declining because of the situation in Kashmir, Punjab and Assam civil aviation being in the doldrums, remittances delining due to the Gulf war and the higher interest rates offered by other countries and increased outflow of foreign exchange because of debt servicing. In this situation the invisibles policy needs review, particularly the NRI deposits (FCNR) which with NREP amounts to Rs. 7,675 crores, is high cost money instead of which commercial borrowing or foreign investment will be cheaper. Also the policy of large short term borrowing ($3—4 billion) is uneconomic as it adds to our repayment burden. But it must be admitted that there are not many options in the area of invisibles. With a view to boost exports, the government announced in June that FERA companies will be allowed third part, exports of a wide range of commodities including those in engineering, chemicals, electronics, and jute sector. The exports are to be made only to general currency areas. Exporters were also informed in June that their CCS payments will be made in August as

the government has now out of the funds in the vote on account. On individual items while dyestuff exports in 1990—91 was Rs. 506 crores against the target of Rs. 876 crores, engineering export recorded a rise of 46 per cent in the first month, April of 1991—92, giving rise to hope that the year's target noted above will be met.

Aid and loans

Towards end of June, World Bank made a loan of $458 million towards the $3.18 billion project to stop the flaring of Bombay High gas which flares 12 million cubic metres of associated gas a day. The World Bank extended a loan of SDR 100 million for the Narmada project. In June, Japan made a loan of $150 to cover refinance extended by Small Industries Development Bank for development of small industries included in India and Japan, agreement on three loan agreements for $410 million for Anpara power transmission and small industries. UK made two grants of Rs. 40 crores to finance slum improvement in Calcutta and Rs. 50 crores for slum improvement in Vijayawada. It made a loan of 30 million as short term balance of payment assistance. Switzerland is to provide a loan of Rs. 140 crores for import of capital goods and services from Switzerland. A UNDP report on human development states that it is political will that is lacking in industrial countries and not financial resources to promote aid and loans to the Third World countries. A RBI study shows that dollar deposits under foreign currency non residents (FCNR) and non resident external rupee (NREP) accounts referred to in the previous section, were pledged as Security for bank advances abroad, rose during 1985—88. 81 per cent of dollar deposits and 84 per cent of pound sterling deposits were with interest rate of 9 per cent : in the case of NREP 62 per cent of deposits were with 12 per cent interest rate and 25 per cent with 10—11 per cent interest rates. This is high cost money as noted earlier. The World Bank condition of written assures for making loans for power projects has been referred to earlier. The IMF loan to which reference was made earlier, official circles feel will have to be under its structural adjustment facility for upto $7 billion. The exact amount will soon be known when parliaments meet in early July. According to the World Bank, India's external debt rose by $8.45 billion in 1990 to $70.953, making it the third most indebted country after Brazil and Mexico.

International

World Economy

IMF in its 'World Economic Outlook 1995' expects continued structural reform in India and other South Asian countries, where it states slippages in policy implementation led to intensified price pressure. Its statistics show that GDP in India rose by 9.7 per cent in 1988, 5 per cent in 1989 and 4 per cent in 1990. Inflation in India rose by 8.6 per cent in 1988, 7.9 per cent in 1989 and 9.1 per cent in 1990, and in Pakistan by 8.4 per cent in 1988. 2 per cent in 1989, 10.6 per cent in 1991. In industrial countries inflation will increase in 1991 due to rise in oil prices. The medium term growth for global economic growth have deteriorated since the October 1990, World Economic Outlook, slowing from 3.25 per cent in 1989 to 2 per cent in 1990 and down to 1.25 per cent in

1991, due to recession in industrial countries, decline in output in West Asia, East Europe and USSR. With recovery in some major industrial countries in 1991, and successful implementation of stabilisation policies and structural reform in developing countries, world growth should rebound in 1992. This is also be reflected in world trade falling from 7 per cent in 1985 to 2.5 per cent in 1991, rising to 5.5 per cent in 1992. This global analysis has little relevance to India except in regard to the sectors pertaining to India. Another IMF staff study points out that domestic and external debts are closely linked in the Third World countries and should be studied together. Another report, the 61st annual report of the Bank for International Settlements raises doubts about the IMF forecast that there will be an upswing in 1992 in countries now in recession before the recession spreads to the countries where demand is still strong. The answer is probably yes. In the developing countries, there is no interest in business cycles because their economies are managed by governments. But the recession and business cycle in industrial countries will affect the developing countries because the demand for their products will fall. So the report concludes that business cycles are relevant to their governments and central banks which should learn to manage the effects on them of the business cycle. The report emphasis the importance of supply and demand policies to counter business cycles, particular demand management which has implications for the world economy. It calls upon the industrial countries to join in efforts to alleviate poverty in poor countries and help create viable economies in these countries. For 9 years most efforts have been directed towards moving out of the impasse of the debt crisis. There is need to go beyond the rescheduling of debt and debt service reduction to help the countries deal with alleviating poverty and raising their GDP and living levels This is a hopeful note coming as it does from the Bank of International Settlements. The Japan centre of informational finance in a report states that there will be a $30 billion capital shortfall in the world economy this year and will continue into 1992—93 at $25 billion in capital being needed. Ofcourse as usual the major burden of the shortfall will be on the developing countries, where flow of capital into their economies will taper off. This is contrary to the BIS plan and is a good advance warning for action by the industrial countries towards the developing ones.

IFC

World Bank President was at long last able to announce at June end that the capital of the International Finance Corporation will be increased from $1.3 billion to 2.3 billion. The US which had blocked this 1 billion increase of the IFC capital because it wanted the World Bank to increase its loans to the private enterprises, was finally forced to withdraw its objection by the unanimous decision of the IFC Board.

SAARC Chamber of Commerce

In June the Chamber of Commerce of the SAARC countries at a meeting in March joined together to form the SAARC Chamber of Commerce and Industry to promote and foster regional economic cooperation. This is an important development which may give some life and direction to the slow developing intergovernmental body—

SAARC. It is to be regretted that India and Sri Lanka did not send a representative from their Chambers to the meeting and were represented by their diplomats. Why was this? Was not enough time given to the Chambers of Commerce to prepare for this important meeting? The headquarters of the SAARC chambers has been established in Pakistan. Both India and Nepal chambers offered to host the meeting. That shows their keeness in the project which should have been used to get a really representative meeting organised at which actual programmes for information exchange and joint action could have been decided.

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II Agricultural Development in Tamil Nadu

Paddy and other crops

In June, the farmers profited from the pre monsoon and monsoon rains to begin dry ploughing to prepare the land for the paddy crop. Those with filter points are raising nurseries. By mid June farmers in Thanjavur have transplanted kuruvai paddy in 10,000 acres and kuruvai nurseries have been raised in 3000 acres, which they will use for planting in 30,000 acres. The farmers in Periyar district are using the Rs. 14 lakh allotted to them by the union government under integrated rice production development scheme; which helps farmers in 10 districts and is now extended to Ramanathapuram, Pasumpon Thevar Thirumaganar district in addition to Periyar. The farmers are using all the favourable weather factors including the satisfactory water storage both in the Periyar and Vaigai dams believe the usual paddy production can be achieved as in 1990-91 when paddy coverage in the district was 22,840 hectares producing 1,50,697 tonnes of paddy. The major development in June for the farmers in the interim award of the cauvery tribunal which is to take effect from July 1 with the release to Mettur from Karnataka to be regulated on a weekly basis as follows in tmcft: June 10.16, July 42.76, August 54.72, September 29.36, October 30.17, November 16.05, December 10.37, January 2.51, February 2.17, March 2.4, April 2.32 and May 2.01, with for each month the releases to be made in 4 months in 4 equal instalments. If in a particular week it is not possible to release the required quantum, the deficit is to be made in the subsequent week. If this award goes into effect in July of the year, the delta farmers, after a decade, will be able to take up kuruvai cultivation over the usual large area of 12 lakh hectares. But Karnataka is talking about appealing for a revision of the decision by the Tribunal, and if necessary by the Supreme Court on the grounds that the data on which the award was made is wrong and Karnataka does not have 205 tmcft water to spare. Its Chief Minister has asked the union government not to act on the Tribunal verdict until he hears from him. If this happens it is doubtful, when the award will benefit the farmers. Meanwhile the farmers are awaiting the decision on the release of the water

from Mettur, for which the traditional date of June 12 is now well past. The government reports that it has procured from paddy farmers 11 lakh tonnes in 1990-91 against the 12 lakh tonnes last year. The state's rice buffer is 6.75 lakh tonnes and with the union grant of 75,000 tonnes a month, the PDS is in a comfortable position.

Research results

Of the 25 research reports recorded in June the largest, 6 in number is in regard to rice and can all be used by the paddy farmer straightaway: using subabul as leaf manure increases rice yield by 25 per cent and reduces the cost and dosage of the nitrogen fertilisers used as the agricultural college research station in Madurai demonstrates: the Madras station also shows that growing a legume green manure also before paddy improves its productivity: IARI New Delhi supports this conclusion showing that it increases the supply of both nitrogen and phosphorous on tropical legume supply to the paddy field and plant: the rice research station Tirunelveli warns paddy farmers that the ragged stunt disease, a recent three pronged disease must be identified at the early stages of the paddy plant and checked with dimethvate : TNAU research shows that given the high cost and shortage of chemical nitrogen fertilisers, the paddy farmer should use bio fertilisers, like free living and symbiotic form of nitrogen fixers associated with azospinilum which results in 6 to 9 per cent higher growth yield : finally APAU has developed a new high yielding rice variety, MTU 2067 which is also resistant to brown hopper and can be used by farmers in double cropped areas of Thanjavur and Tiruchi. Second, a series of research results to counter plant diseases are reported: from APAU, Ponnu, which shows that farmers can control root knot nematodes by use of decompasable organic matter, crop rotation and the burning of dried crop residues or paddy turnover the soil surface: the national pulses research centre Vembar shows that yellow mosaic, the ravaging diseases of green gram, horsegram, red gram, black gram and soyabeans can be controlled by gram growing farmers by timely removal and distribution of diseased plants, using a short duration variety of black gram vemba I, and growing various crops like sorghum, maize or pearl millets : the horticultural research station Ballampalli states that the foot rot of castor should be detected and controlled at the start by preventing water logging and soil drenching with chemicals: the Vridachalam research station states that the rhinoceres beetle of coconut can be controlled by growing and using a fungus which checks and paralyses the pest: IARI reports that the rice bran plant hopper can be controlled and wiped out by use of broad spectrum of insecticides and for this it proposes training farmers to recognise such friendly insects. A third group of results which can be transferred to sugarcane farmers comes from the Agricultural college, Kumulin which advises him to use nitrogen, moisture and reduced sugar content to produce more generation: similarly the TNAU station Cuddalore shows that packing the ridges of the cane crop after planting with sugarcane trash (dried leaves) upto 10 cm check weeds, conserves soil moisture, keeps the early shoot borer away and improves cane quality. Finally for the animal husbandry farmer, the Madras Veterinary College lays down 3 guidelines—feeding on Vitamin D, low

intake of calcium and phosphorous and inadequate milking as a means of checking milk fever in cows : similarly the Krishi Vigyan Kendra in Kattupakkam advises him that bovine sumafotroppin (PST), a cattle grown hormone which is produced in its pitutary gland improves the efficency of the milch animal, reduces its cost and increases its milk yield: the animal health centres, Nizamabad shows that blue tongue which is an infectious, non contagious, viral disease of sheep can be controlled by preventing starvation, dehydration and secondary infection and above all through vector control plus vaccination.

Tea

The basic dilemma in tea is that the rate of increase of the consumption in the country far outstrips the annual production increase For 1990, it is estimated that tea production will be between 710 and 730 million kg and domestic consumption 515 million kg, leaving an export surplus of 195 to 215 million kgs. Not only is domestic consumption rising fast: in 1947 domestic consumption was 79 million kg out of total production of 255 million kg (31 per cent) in 1988 domestic consumption rose to 479 million kg out of 710 million kg production (68 per cent): the surplus is being exported increasingly to non free foreign exchange area: in 1989, 40 per cent was exported to free foreign exchange area, in 1990 it has declined to 34 per cent, at a time when the country wants increasing foreign exchange resources. Further branded tea which was 34 per cent of exports to the free foreign exchange area has fallen to 26 per cent in 1990. Under these conditions, it is urgent that tea production which is stagnant at 1650 kg per hectare should be rapidly raised by a) an accelerated programme of replanting tea bushes, b) all tea planters adopting the high yielding clone of tea TV29 with a yield of 9500 kg. Second, there should be an intensive publicity drive, which does not exist today, to replace tea consumption by coffee, particularly in the North. In this, the lower capitalisation of tea gardens vis a vis other industries has been of help in a substantial reduction of repatriation of foreign exchange from the sterling companies. The tea industry request for lowering interest rates on export credit, repayment of loans and waiver of current restriction, freezing cash credit to avoid loss of exports might be given consideration by the government as short term palliatives to promote exports.

Rubber

Rubber production in 1990-91 rose to a record 330,000 tonnes against the previous year's 297,000 tonnes and the VII Plan average of 250,000 tonnes. What is encouraging in this record production for 1990-91 is that the per hectare yield has risen to 1075 kg from the previous year's 1029 kg and the VII Plan average of 900 kg. Among reasons for this expanded production is the fact that the Rubber Board's programme to encourage and promote new planting and replanting in traditional and non traditional regions of the country, under its plantation development programme is now catching up as seen in the increased numbers (1.5 lakh beneficiaries) and disbursal of cash subsidy (Rs 12.36 crores) among the planters.

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III Industrial Development in Tamil Nadu

Industrialisation

June recorded the usual pluses and minuses with regard to the industrialisation of the state.

The *first* positive indication was the reiteration in the new state government Chief Minister's declaration that it has under consideration *Proposals for deinvestment* of some public sector units. The two limitations to this declaration is that it is restricted to profit earning joint sector units, while the loss making joint sector units are to be improved and rehabilitated. Here there is no either or. The disinvestment should include loss making public and joint sector units. A second limitation is that the reference is to serving such disinvestment as a means 'to overcome the financial difficulties' of the government. This is necessary but the main motivation should be the fact that the government and its staff has no competence in the industrial and business field. *Second, TIDCO* announces that 6 new projects in the joint or associate sector with a capital of Rs. 184 crores are being planned—the biggest being the Rs. 75 crores aluminium rolled product plant with a capacity of 25,000 tonnes located in Thanjavur, followed by the co-promoted Chemicals and Plastics India (Rs. 50 crores) for the production of its corosulanes and silicone components at Dharmapuri, besides heavy mineral separation with Indian Rare Earth (Rs. 40 crores) at Chidambaram district, a technocrat project to produce intravenous fluids (Rs. 9 crores) and also a technocrat project to produce VP latex in South Arcot (Rs. 10 crores). These are in addition to the four units being commissioned this year—Sargam Aluminium in Hosur (Rs. 11 crores), Tamil Nadu Telecom (Rs. 28.5 crores) at Arkonam, Ushstate Biotech (Rs. 44 crores) at Cuddalore and the Ajna Lamps and Glass Works. *Third,* and importantly a much need pig iron plant (Rs. 100 crores) is being set up in the joint sector by *TIDCO and Lakshmi Machine Works,* Coimbatore. The first such plant in the state, it will have a capacity of 180,000 tonnes and the private sector collaboration is a guarantee of its success from the start. *Fourth,* the *Ambattur Industrial Estate* has exceeded Rs. 1000 crores in its turnover this year. This should be followed up by establishing machinery for assembling data from the small scale industries whose annual turnover has been reported at Rs. 300 to Rs. 400 crores as a guess work. Related and more important is the move by the small scale sector industries to take an important step in self help by forming a corporative undertaking called the Small Industries Product Promotion Corporation Ltd (SIPPOL) 'to deal with their perennial problem of marketing and promote their products within and outside the country. *Fifth,* an *exclusive garment industrial estate* is taking shape in the setting apart of 52 plots for garment manufacturers in the Kakkallur industrial estate. It has all the infrastructural facilities of power, water supply and sewage and now needs a railway station. This estate is also important nationally as garments is one of our thrust areas in export. *Sixth,* relatedly *Madura Coats* reports exceeding working results for 19901—91 and will be investing more on production facilities for yarn, thread work, wear and shirting this year. Last year its exports increased by 19 per cent to Rs. 64.01 crores. *Seventh, Spencers* whose turnover crossed Rs 1C0 crores in 1990-91 is now expanding its pharmaceuticals division and its liquor market network. *Eighth, Real Madras Hand kerchief* is also booming in exports expanding from Rs. 13 crores in 1989-90

to Rs 26. crores in 1990-91. Its sol consumers are in Nigeria. *Ninth, Pentafour Products* engaged in the manufacture of a range of sophisticated products such as air conditioners not only for homes and offices but also for cars, buses and trains plans a turnover of Rs. 15 crores for the current year. Its expertise has been invited by a West Asia industrial group to set up a manufacturing base in that country. *Tenth, Tube Investments International* is delinking its stakes in TI India from 27.13 per cent to 11 per cent. This means a disinvestment of 10,90,410 shares by the parent company in favour of the existing resident share holders in the ratio of two shares for every one. *Eleventh, EID Parry* is expanding its Rs. 210 crores operation by taking over Rajasthan based Falcon Gulf Ceramics. This will make EID Parry which has become a South Indian firm now an all India company with its manufacture of sanitaryware in the North and West India. *Twelfth, SPIC* which has recently taken over the sick Tuticorin Alkali Chemicals (TAC)-see last issue has applied for exemption from 40B of the listing agreement in order to make an open offer to shareholders. On this, SEBI and the Madras Stock Exchange should support it to back up its take over of the sick TAC. *Thirteenth, Rane Madras* is extending to foreign market by entering into a contract with Massey Ferguson (UK) an original equipment manufacturer. This will also help it to raise its share of exports to 5 per cent of sale and guard against the future loss of its domestic monopoly for manufacture of certain types of equipment. *Fourteenth, the Kothari (HC)* groups scheme to develop India's second PNCB/ONCB project in Karaikal will go on stream by 1991 end. It has technical collaboration with Switzerland and West Germany. *Fifteenth, Tamil Nadu Newsprint and Papers Ltd* (TNPL) has recorded an impressive growth in both items of production and profits. It is doubling its capacity from 90,000 tonnes to 1.8 lakh tonnes within the next 36 months at a cost of Rs. 360 crores. Its bagasse route for paper manufacture is of both national and international interest. *Sixteenth, India Cements* has finalised plans to take one of the oldest units in the state, the Tirunelveli based sick unit, Industrial Chemicals and Monomers Ltd (ICML). ICML is a BIFR case manufacturing calcium carbides. It has been closed for 2 years. Now India Cements is planning to modernise the plant and streamline its working at a cost of Rs. 3.5 crores to Rs. 4 crores. *Seventeenth, Tamil Nadu Minerals (TAMIN)* which is one of the very few state public sector enterprises doing well, is setting up a Rs. 5 crore 100 per cent export operated granite tile plant in Madras, expanding also its facilities at Ennore where it is installing circular saws for monument making and also adding gang saws. Finally, the *Tiruppur Export Association* in cooperation with wool and Woolen Export Promotion Council is launching a knit wear development industry on a massive scale in the state. 25 export units are being started now to be followed next year by a further 35 units which together will be exporting Rs. 200 crores of knitwear.

On the negative side of the industrial development of the state, *first* after a long drawn out battle BIFR has ordered the closure of *MALCO*. The plant itself is in excellent working condition, but with its small installed capacity of 25,000 tonnes compared to NALCO's 2.18 lakh tonnes, it really has no future. So its closing is a negative external factor but is positive in contrast to its state take over. *Second,* MRTP has launched an enquiry into the

alleged restrictive trade practices indulged by the Reliance Industries in concert with *Tamil Nadu Petro Products* (TPPL) in fixing the price of linear allkyl benezene which was Rs. 23,000 and after one month Reliance followed suit, next Reliance raised the price to Rs. 27,000 on August 9, 1989 and after 3 days TPPL followed suit. Then on November 4, 1990 TPPL raised the price to Rs. 30,000 and after 2 days Reliance followed fixing the price at Rs. 30,250. The Tamil Nadu Small Scale Soap and Detergents Manufacturers Association which made the complaint points out that the cost of production of LAB for TPPL is Rs. 2000 more than for Reliance but both have raised the price to the same level and the large profits being made by TPPL shows that the price is excessive. IPC which also makes LAB has a lower cost and charges less. On the positive side TPPL is setting up a Rs. 94 crore captive caustic soda unit at Uthamacholapuram in Thanjavur district. *Third, Sugar mills* in the state might be forced to stop crushing operations if the union government does not allow the export of molasses, which is accumulating in big quantities (4.5 lakh tonnes during the current 1991—92 season). The storage of molasses by the mills has become a problem, their storage tanks are overflowing and excess molasses are being let into kutcha pits, which pose serious environmental hazard. Now with the decision of the government to close cheap liquor shops, the offtake of molasses will be decreasing further. The state government recommended the export of 10,000 tonnes of molasses 3 months ago but the union government wants its export of value added product and not the raw material. This absurd situation must be solved by allowing the industry to export surplus molasses. *Fourth*, the *Tanners* in the state are facing a serious financial crunch, following stock-piling of EI tanned goat skin. There are 3 options facing the union commerce ministry : ask leather product manufacturers to clear the stock, arriving by June to 40 to 50 lakh pieces worth Rs. 40 to Rs 50 crores : or instruct STC to buy the accumulated goat skins for sale to product manufacturers or allow export of EI tanned leathers for which there is a ready demand in Japan, Italy and other countries. The situation is similar in buff calf leather and special leathers like terra cotta. *Fifth, Binny* which is embroiled in a long drawn out labour dispute is really a loss making unit, if the balance sheet is read along with the accompanying notes, which should be done. Though the audited statements show cash profits, the company's net worth is in the negative, its accumulated losses amounted to Rs. 56 crores as at March 31, 1990 as against its paid up capital of Rs. 7.06 crores. It is selling its real estate to cover its losses and is constantly revising the real estate value. All this is being done to prevent the company from being declared sick. *Finally*, the *gold refinery* in Madras which was set up in October 1989 has now been closed without any explanation, causing a deal of difficulties to local jewellers who cannot now find means of refining or assaying the metal without undertaking the heavy cost, risk and travel to the Bombay mint. Possibly this may be an occasion for reviewing the system of placing gold refineries under the control of mint.

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IV Education, Science & Health

Educational Reforms

In June the High School and Higher Secondary School results were published. It was found that the top ranks are secured in all the examination by girls and that students from the mofussil do better than those from the major cities At the university level, the state government announced that it has approved 13 more self financing arts and science colleges. UGC has circulated all states about some 21 fake universities and warning students and parents not to be taken in by their advertisements. It has also proposed to government to amend the UGC Act so as to make the starting of these fake universities a congnizable offence and punishable by imprisonment. UGC has sought an increase of Rs. 605 crores in the Plan outlay at Rs. 200 crores, to revise the assistance pattern for the allotment to universities as also to discourage the starting of new colleges. It has also dicided to discourage the setting up of new departments in these universities during the VII Plan and instead will finance projects for the growth of infrastructural facilities in the existing post graduate departments. This has been drawn up to meet the financial constraints of the VIII plan. There are now 100 autonomous colleges under UGC which will discourage the growth of colleges without adequate infrastructural facilities. In a major effort to promote university-industry interaction, Anna University is floating a novel scheme called "own your university". Under the scheme, the university will induct industrial units as associate member on payment of a nominal amount, and offer in return a host of services, including laboratory testing facilities at its campus in the city. This will help to forge strong bonds between the university and industry for mutual benefit.

Literacy

In the literacy field, there are two somewhat contradictory developments. On the one hand, following the 100 per cent literacy achievements of Kerala (see Vol XXI p240), the Burdwan district in West Bengal and the Durgh district in Madhya Pradesh have now launched on a programme of attaining 100 per cent literacy by the end of the current year. On the other hand, Unesco in a report recently released says that the twin goals of basic education for all and eradication of illiteracy will not be attained by 2000 because of the number of children in developing countries not attending school, numbering 4 million (19 per cent) in Eastern Asia and Oceania, to 52 million (39 per cent) in South Asia 38 million (49 per cent) in sub Sahara Africa, 9 million (30 per cent) in Arab states and 8 million (18 per cent) in Latin America and the Carribbean. The two reports are not really contradictory because they show the need for the kind of intensive effort being undertaken by Burdwan and Bhopal.

Science

The National Informatics Centre is expanding its computer network to cover every village within "bicycling distance '. The network will cover 58,000 development blocks, each of which has about 100 villages clustered around it within a radius of 12 kms Currently 45 districts are linked to store, exchange and access information needed for official scientific decision making. The network played a crucial role during the recent

elections by helping move messages and election results between different constituencies and Delhi. NICNET made poll news live. The worlds' first hybrid pigeon pea plant developed by the scientists at ICRISAT, Hyderabad has been released. This is a technological breakthrough as this is the first time, that the hybrid of a pulse crop has been developed.

Health

A working group of the Planning Commission has called attention to the distortions to the family planning programmes caused by the "tyranny of targets". It has suggested instead a holistic approach to the whole issue of servicing the health care of identified mothers and children. According to the working group, the 4 states of Bihar, MP, Rajasthan and UP which constitute about 40 per cent of India's population have crude birth rate, crude death rate, IMR at levels for higher than the national average. There is need for a well coordinated strategy to harmonise and accelerate different programmes beyond family planning including the empowerment of women. This would remove the obsession with numbers which has led to virtual obiliteration of the person whom those numbers represent. This also calls for a complete transformation of the attention of both workers and their superiors towards the targets and to turn their attention to the reality of health care activities of mother and children.

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V Employment and Labour Relations

The latest data on job seekers which is an alarming 34 million plus by the employment exchanges is set forth below :

	August 1989	July 1990	August 1990	Percentage increase (+)/decrease(—) over: Previous month (Col.4/ col. 3.)	Percentage increase (+)/decrease(—) over: Corresponding month of the last year (Col.4/Col.2)
1	2	3	4	5	6
1. Registrations	814,871	801,368	607,334	(—)24.2	(—)25.5
2. Applicants on the live register at the end of month (000s)	32,127	34,098	34,286	(+) 0.6	(+)6. 7
3. Vacancies notified for submission	59,935	45,130	45,226	(+) 0.2	(—)24.5
4. Placements effected	22,452	18,677	18,466	(—)1.1	(—) 17.8

Employment Service Statistics During August 1990

State/Union Territory	No of Exchanges at the end of the month	No.of registrations during the month	No.of applicants placed in employment during the month	No.of applicants on the live register at the end of the month(000's)	No.of vacancies notified during the month
1	2	3	4	5	6
Andhra Pradesh	30	39,210	1,339	2,937	5,047
Arunachal Pradesh	1	134	—	5	61
Assam	49	16,273	243	1,000	612
Bihar	58	77,826	378	3,305	591
Goa	1	—	—	88	—
Gujarat	36	15,137	1,152	959	2,541
Haryana	85	19,716	851	579	1,629
Himachal Pradesh	13	3,266	256	452	181
Jammu & Kashmir	14	1,542	68	108	262
Karnataka	31	26,165	543	1,206	1,295
Kerala	39	17.811	969	3,352	1,873
Madhya Pradesh	55	38,194	946	2,055	1,716
Maharashtra	38	72,606	3,454	3,075	7,144
Manipur	9	712	3	203	13
Meghalaya	7	603	41	24	68
Mizoram	3	862	139	41	268
Nagaland	7	456	1	21	94
Orissa	20	17,246	600	877	1,908
Punjab	40	16,751	592	622	2,779
Rajasthan	28	19,006	587	946	915
Tamil Nadu	30	62.661	2,561	3,208	7,345
Tripura	4	1,415	223	156	30
Uttar Pradesh	79	76,365	1,407	3,140	4,044
West Bengal	68	63,216	637	4,737	1,528
Andaman & Nicobar Islands	1	377	35	16	48
Chandigarh	1	2,631	43	156	212
Dadra & Nagar Haveli	1	—	—	2	—
Delhi	17	13,573	1,341	832	2,517
Daman & Diu	2	—	—	—	—
Lakshadweep	1	—	—	5	—

Pondicherry	1	3,580	57	120	330
Central Employment Exchanges	—	—	—	—	175
Total	769	607,334	18,406	34,286	45,226

Source: Directorate General of Employment and Training, New Delhi

The labour ministry sets forth quite an impressive programme of work on the conditions of workers ahead of Parliament. These include the labour participation in management bill and the Construction Workers Act both before Parliament. The ministry states that it has completed the exercise for the introduction of an agricultural workers bill intended to safeguard the interests of farm labour. A meeting of the Indian labour conference is planned to consider a new industrial relations bill which will replace the earlier draft which met with stiff opposition.

VI. Other Items

NIRD

The annual interdisciplinary workshop organised by MIDS and the regional office of ICSSR was held at the National Institute of Rural Development, Hyderabad. It was attended by 25 specialists from all over India and included social, engineering and physical scientists on the issues of safeguarding the environment. The declaration emanating from the workshop is reported in this issue. The National Institute is located in a very attractive campus some 10 kms away from Hyderabad city. Its infrastructure is most impressive as is its staff specialisation in all the areas of rural development. It is an outstanding research and training institute.

SRC and TNBCE

The two monthly meeting of the State Resource Centre was held in early June when besides reviewing of the work of the Institute, the report on the evaluation of the Mass programme of Functional literacy being run by 8 universities out of the 14 universities in the state was reviewed in detail. It was noted that the programme has many lacunae and that there was an agreed recommendation that adult literacy should be made part of the curriculum. This was accepted. There was a meeting of the executive committee of TNBCE (both meetings which were scheduled at the end of May had to be postponed to the following week because of the assassination of Rajiv Gandhi). The executive committee spend most of its time planning for the Annual Conference of SRC and TNBCE to be held in October in Vridachalam on the theme Total Literacy and the Mass Programme of Functional Literacy. The detailed programme is being drawn up by the office.

RDI

There was the quarterly meeting of the Board of Directors of Reader's Digest, India in June. After reviewing the good and successful work of RDI,

the meeting of all the language editors in the US at which RD policy was discussed, with the US taking the leadership in determining its contents. This was followed by a report on a meeting in Finland on the marketing of publications and the means of extending and strengthening them. The financial position of RDI was reviewed and its satisfactory nature was noted.

IIC

There was a meeting of the monthly panel of the Economic Affairs Group of the India International Centre which dealt with India's contribution to international economic relations. There was a review of India's foreign trade and the need to move towards a position of equilibrium in exports and imports and the balance of trade. There was also a review of aid and it was suggested that the country's reliance on foreign aid which is really a series of bilateral loans should be gradually reduced. There was also a discussion of India's participation in international economic bodies like GATT, UNCTAD and the World Bank and ADB and there was the feeling that India's role in these bodies should be taken much more seriously.

MANAR

There was a meeting of the Madras Committee of the Mass Programme for National Regeneration (MANAR). It devoted itself mainly to preparing for the meeting of the Vice Chancellors and Principals of autonomous colleges of the states in early July. The basic purpose of this meeting was noted, the agenda of the meeting was also discussed and agreed to. It would be a business like meeting, mainly devoted to a statement of the Vice Chancellors and principals who are able to commit themselves to this programme, which makes Adult literacy and other nation building activities part of the curriculum.

Human Development

There was a very interesting symposium organised by AIR on human development in the Indian perspectives. There was agreement that a distinction should be made between human development in India which is essentially based on the Indian value of Satya and Ahimsa which are being deprived today and so contributing to inhuman development, and human resource development which is an instrument of human development based on the stated values. There are 3 thrust areas to promote human resource development-education particularly primary and literacy education, health care seen as a state of well being of the person and not simply absence of disease, with particular emphasis of the health of women and infants. The long distances which India has to travel in both these areas, human development and human resource development was noted.

July Development Seminar

The paper for the July Development Seminar - Notes on Tamil Nadu: An Economic Appraisal 1989, presented by Malcolm S. Adiseshiah, together with a summary of the discussion on the paper at the seminar presided by Mr. Inbasagaran, Member Secretary, State Planning Commission, appears as the first article.

Second Article

The concluding Declaration on Management of Renewable Energy Resources at the Inter disciplinary Research Methodology Workshop held at NIRD, Hyderabad appears as the second article.

M I D S News

Dr. Paul Appasamy prepared a background paper and participated in the Workshop on Monitoring and Evaluation of the National Watershed Development Programme for Rainfed Areas, organised by National Centre for Management of Agricultural Extension, Hyderabad from 8-12th July, 1991.

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Mr. S. Guhan participated in a seminar on the Budget organised by the Indian Economic Association Trust at the University of Madras held on 22nd July.

He also delivered a talk on the Union Budget for 1991-92 at the Bharathidasan Institute of Management, Tiruchirapalli on 7th August.

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Dr. A. Vaidyanathan participated in a seminar on the Budget organised by the Indian Economic Association Trust at the University of Madras held on 22nd July.

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Dr. Nasir Tyabji attended a discussion organised by the School of Social Sciences, Indira Gandhi National Open University, on the Public Administration Component of the Bachelor's Degree Programme, held in New Delhi on 25th July.

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Dr. S. Neelakantan acted as an External Examiner for a Ph.D. Viva Examination on 19th July at Centre for New International Economic Order, Madras.

He also served as a member of the panel of USIS Worldnet Dialogue on "Markets and Planning in Developing Economies" on 7th August.

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Dr. Padmini Swaminathan was a panal member for a discussion centred round the Budget and the Industrial Policy organised by the Loyola Institute of Business Management on 3rd August at Loyola College.

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A special seminar on "Union Budget and the Economy" jointly sponsored by Madras Institute of Development Studies and Madras University School of Economics was held on Saturday, 10th August, 1991 in the Seminar room. Dr. Malcolm S. Adiseshiah chaired the session and Mr. S. Guhan presented an Overview. In the first session Mr. K. R. Ramamani, Tax Expert initiated discussions about new tax proposals and their impact. In the second session Dr. S. V. Bokil of Institute for Financial Management and Research initiated discussion about external economic transactions and budget.

In the post lunch third session Dr. U. Sankar of University of Madras initiated discussions about fiscal deficit and macro economic implications. In the valedictory session, Dr. C. T. Kurien initiated discussion on the general impact of the budget.

Some Comments on Tamil Nadu : An Economic Appraisal 1989

by

Malcolm S. Adiseshiah
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Prolegomena

In this prefatory section, some broad as well as specific issues are raised :

The first is the traditional issue, traditional in the sense that I have raised the question since 1979—80, of the timing of this publication—Tamil Nadu Economic Appraisal 1989, which really deals with the financial year 1988—89. The document in its preface refers to 11 July 1990, as its date of publication, and has actually been sent to the Institute on 13 May 1991. Of what use is the document, which ends its appraisal of the state's economy as at 31 March 1989, which is received 15 months later on 11 July 1990 (officially) but in the reality 25 months later. Who is this document addressed to? It has been suggested that like the union government's annual economic survey which is made available to Members of Parliament just before the presentation of the Annual Budget, the state's economic appraisal should be in the hands of the members of the legislature at the time of the presentation by the government of the Annual budget. The Annual budget for 1988-89 was presented and discussed in Parliament on March 1988 while this valuable aid for its analysis and discussion, the Tamil Nadu Economic Appraisal for the year was made available more than 2 years later. This issue was discussed by the State Planning Commission at its meeting in May 1991 and its recommendation is that to prevent this document becoming an archival material which it is now, it should be made part of the budget document, which will then give its drafter's a deadline for the document and will receive all the needed priority for printing and processing by the government press, as the other budget documents do. This may involve the drafters of this document becoming part of the Department of Finance.

A second issue, which is somewhat specific is that the source of statistical tables set forth in Part II should be more fully spelt out. Too many of the

tables state the source as the Director of Statistics. What is necessary is to know from where the Director of Statistics got his data - as in the case of Table 1.8 Perspective Population by Districts, or table 3.1 rainfall : season wise, or table 3.4 land utilitisation by districts or Table 6.1 Index Number of Industrial Production, etc. In this connection it is of interest to note that the document treats statistics from non government expert agencies like CMIE and MIDS on all fours with data from government agencies, which is sound.

A third issue is to review the tables set forth in Part II in order to see whether some of them can be omitted because they are not used by any governmental or non governmental agency and for them to be replaced by other needed data. For intance the use of some tables like 3.20 and 4.2 can be reviewed, while data on the state of poverty derived from NSS's 43rd and 44th rounds survey of consumer expenditure in rural and urban Tamil Nadu would be useful particularly if in the community they are related to the poverty line in Tamil Nadu.

Finally the sources for analysis and understanding Tamil Nadu Economy in 1988-89 are limited. They are the document Tamil Nadu—An Economic Appraisal 1989 (by the government's Evaluation and Applied Research Department), the Census of India 1991, Series 1 paper I of 1991 of statistics, series 2.3 Paper I of 1991 of Tamil Nadu, the 43rd and 44th round of NSS, CMIE's Basic statistics relating to the Indian Economy Vol 2 states, September 1990, and the twenty two issues of the 1988 and 1989 Bulletin of the Madras Institute of Development Studies and the Institute's Tamil Nadu Economy—Perspectives and issues.

Purpose of Appraisal

The purpose of the Appraisal is to see how far the Economy has, during the year, moved towards attaining or not attaining the Plan goals of increased employment/reduced unemployment, improved health care resulting in a falling infant mortality rate and improved nutrition, particularly of children and pregnant women, increased protected drinking water supply, acceleration of literacy and education, reduced levels of poverty, and for these various ends how far agriculture, food and non food crops production have increased along, with the allied segments of animal husbandry, fisheries, forestry and irrigation, and how manufactures and the infrastructure have developed both to provide the goods and services needed by the people, and make available to them the needed employment, so that they have the resources to buy the goods they need.

population movements to facilitate this,

1988-89 which the Appraisal document covers is the penultimate year of the state's Seventh Plan - to which there is no reference at all in terms of its objectives and targets in the document. There is a basic continuity in our Plans-the sixth, seventh and the coming Eighth plan at last as far as the goals to be attained are concerned.

As usual, the Appraisal document concentrates on the rate of growth- the annual average rate of growth, the pace of growth of the Net State Domestic Product (NSDP) for 1988-89 and for the period of 1980-81 to 1988-89. It states that "for the second year in succession, the growth rate of NSDP during 1988-89, exceeded the annual average growth rate visualised in the Seventh Plan period". However the

pace of growth registered at 6.5 per cent for the year was slower than in 1987-88 at 8.2 per cent. In Table 1 in chapter 2, State Income, it sets forth the annual average growth rates in each of the year 1980-81 to 1988-89 and concludes that for the period the Tamil Nadu growth rate at 5.64 per cent "did not differ much from the all India rate of 5.52 per cent". This is followed by analysis of the trend and pattern of growth between 1984-85 to 1988-89 (para 2.3), the growth rate of the sectoral composition of income (table 3) the growth rates of the 16 sub sectors into which the total income is divided (table 4) and a similar exposition of the growth rates of per capita income in both current prices and 1980-81 prices in table 10.

As pointed out in previous reviews, this detailed expose of the growth rates of NSDP and the sectors comprising NSDP and per capita income seems to have a magnetic quality on its own, into which all of us specialists and the public get trapped. It sets the terms of the analysis and review. For this, discussion is on whether a) the growth rate for the year (1988—89) was higher or lower than for i) the previous year (1987—88), ii) all India or other state's rates, b) the growth rate was in conformity with the target rate envisaged, c) the rate of growth of the sub sectors are higher or lower in Tamil Nadu than that for all India, and d) a new table (table 9) where, the percentage share of each sub sector is compared as i) between its contribution to NSDP and employment in the year and ii) between state and all India. Naturally one is lost in these growth percentage and takes their behaviour as being equal to the behaviour of the economy. In fact attention is diverted from the status of employment, health, education etc to the percentages of growth. It is implied that if Tamil Nadu has a higher growth than last year or All India, it is better off. Better off-why and who is better off?

It needs to be remembered that this heavy and sole concentration on the growth rates is highly misleading for many reasons. For one thing the Net State Domestic Product which is set forth as Rs. 11,07,524 lakhs for 1988-89 compared to Rs. 10,39,499 lakhs in 1987-88 is a highly aggregative figure which puts together all the goods and services produced in the state (cows and apples, paddy and scientific research) in one total and to derive from it a per cent of growth for the year is really to turn the aggregative figure into an abstract mathematical/statistical quantity. The rate of growth tells us even less about the economy in 1988-89. There is no meaning to the statement that the rate of growth "did not stand a favourable comparison on the face of it with that of the national economy at 10.9 per cent". What is it that is being compared? They are 2 abstractions. Why should they be compared? The state economy as an open ended economy cannot be compared with national economy, which is relatively a closed economy.

Instead of pursuing this futile path of growth rates, growth percentages, etc we may turn to the performance of the economy in 1988-89 in terms of the objectives referred to earlier, on which the document : Tamil Nadu : An Economic Appraisal says little and in some cases nothing, compared to its sectors on growth, NSDP, Agriculture and Industry.

Unemployment and Population movement

Using data from NSS's fourth quinquennial survey, it may be noted that there is some reduction in Unemployment except for the usual status workers reported in 1987-88 (which is the 43rd round) as compared to 1982-83 (which is the 38th round). The total labour force employment (prinicipal status) in Tamil Nadu was 24.2 million in 1987-88. The table below gives the percentage of unemployed of the labour force between the 3 rounds, using the census classification of usual status (usually employed) unemployed, current weekly status (employed) unemployed on an average weekly basis, and current daily status (employed/unemployed on an average daily basis) and further distinguishes between the rural and urban unemployed.

TABLE—I

Rural	1982-83				1987-88			
	Tamil Nadu		All India		Tamil Nadu		All India	
	M	F	M	F	M	F	M	F
Usual Status	3.3	2.9	2.1	1.4	4.0	4.5	2.8	3.5
Current Weekly Status	8.1	8.5	3.7	4.3	7.7	6.7	4.2	4.4
Current daily Status	17.6	20.5	7.5	9.0	8.4	10.7	4.6	6.7
Urban								
Usual Status	7.9	8.3	5.9	6.9	7.3	9.1	6.1	8.5
Current Weekly Status	9.8	10.1	8.8	7.5	8.1	9.4	6.6	9.2
Current daily Status	15.1	16.1	9.2	11.0	12.3	13.2	8.8	12.0

Source : NSS

The table shows a high rate of unemployment on the current daily status compared to the usual and weekly status for both rural and urban and a rather sharp fall in unemployment at the current daily status for both males and females.

The slow rate of decline in unemployment rates in Tamil Nadu cannot be reconciled with the low average annual growth rate of the population which the 1991 census reports and is set forth in the table II

TABLE— II

Average Annual growth rate	1981	1991
Tamil Nadu (second lowest)	1.63	1.39
Kerala (lowest)	1.77	1.31
Nagaland (highest)	4.09	4.50
All India	2.22	2.11

Source : Census 1991

This means that employment opportunities were not growing fast enough in agriculture, industry both during the decade 1981-1991 and as between 1986-87 and 1987-88. There is some indication of this in the table below which sets forth the sub sector contribution to income and employment.

TABLE—III

	Tamil Nadu		All India	
	% share in NSDP	% share in Employment	% share in NSDP	% share in Employment
1. Agriculture & allied Activities	25.87	51.51	32.74	61.73
2. Mining & Quarrying	0.39	0.47	1.28	0.70
Primary Sector	26.26	51.98	34.02	62.50
3. Manufacturing	24.62	19.63	20.64	11.77
4. Electricity, Gas, water supply.	0.59	0.35	1.05	0.40
5. Infrastructure	3.87	3.66	4.59	3.99
Secondary sector	29.08	23.64	26.28	16.16
6. Trade, Hotels, Restaurant	18.01	9.68	13.74	7.70
7. Transport, Storage, communication	5.73	3.14	4.00	3.02
8. Banking & Insurance real estates, ownership of dwellings and business services, Public Adminis—tration, other services	20.95	11.56	21.96	10.53
Tertiary sector	44.66	24.38	39.70	21.34

Source : Tamil Nadu An Economic Appraisal 1989.

The Appraisal document points out that a) in the primary sector, the ratio of the sectoral share in total income to employment is 0.51 : 1 in the state which is lower than the all India rate, b) in the secondary sector the ratio for Tamil Nadu is much lower than for all India at 1.23 : 1 and e) in the tertiary sector, the rate for the state at 1.83 : 1 is again lower than that for all India. The employment rates are increasing and per capita unemployment rates are decreasing in the tertiary sector compared to that of the primary and secondary sector

Unemployment is not declining as fast as the population and such reduction as is taking place is mainly in the tertiary sector. By all three criteria, the rate of unemployment in the state is high, being the second highest after Kerala.

Health Care and IMR

NSS in its 42nd round reports on the status of child and maternity care in Tamil Nadu and other states. It shows that Tamil Nadu's rural health services at 28 PHCs, sub centres and community health centres per lakh of its population is the third highest in the country (after Punjab and Gujarat) ; that in hospital and dispensary beds, it is the sixth at 98 per lakh of persons, and that in number of doctors registered, it is second at 83 doctors per lakh persons. The nutrition status shows that in 1971 children below 3 have a calorie intake of 700 against the recommended 1200 per day and for pregnant and lactating mothers it is a third short of the recommended 2500 to 2700 calories. As a result of malnutrition, the average weight at birth of a child is 2.73 kg. There has been some improvement which the 1981 survey records and further that the 1991 survey being processed will show. As a result, the infant mortality rate which was 106 per 1000 live births in 1981 is reported to have decreased to 77 in 1986 and 68 in 1989. In this area of child and health care the state has made progress. This should improve its sex ratio (the number of females per 100 males) which has been falling steadily from 1611 in 1941, 1007 in 1951, 992 in 1961, 978 in 1971, 977 in 1981 and 972 in 1991, according to the 1991 census referred to earlier. As the infant mortality rate, particularly the rural female infant mortality rate declines, the survival of the girl child and of women will improve as well the sex ratio.

Water supply and housing

The provision of drinking water particularly for the rural areas is one of the important plan goals. In 1988-89 the majority of villages did not have potable water supply - and what is worse as the Appraisal document reports, is that the number of villages being provided the facility of drinking water was decreasing annually. In 1987-88 632 villages were so provided (against 770 in the previous year) and in 1988-89 it was down to 573. In the villages in Dharmapuri district, today 645 out of 1065 in 1980-81 are facing water problems. On the rural drinking water front, therefore, the situation is not satisfactory. In 1988-89 11,311 villages out of 15,631 are classed as problem villages by the Tamil Nadu Water Supply Board which means that only 6.8 per cent villages have potable water which places the state in the 3rd lowest rank in India against near double that number at 83.8 per cent having such

water supply in urban areas. As for sanitation facilities, while 47.3 per cent of urban areas are provided with them, putting Tamil Nadu in the first place among the major states in India, in the rural areas, sanitation is near non existent at 0.2 per cent.

On *housing* the performance in the state is mixed. According to the Tamil Nadu Housing Board data, 1988-89 and particularly 1989-90 were years of rather high housing construction, with the housing construction for the low income group being 1727 houses in 1989-89 (spurting to 672 in 1989-90) and that for the economically weaker section being 9300, declining to 599 in 1989-90. The problem however, is that the Tamil Nadu Housing Board should not be a building agency, because the government will never be able to build the 6 lakh houses which are regarded as the backlog in the state in 1971. The study on this subject by the Institute in 1984 concluded that a "long term solution to the problem of housing has to have as its basis, a policy for enhancing and stabilising the real income of the vast mass of the poor and middle income groups in rural and urban areas and of linking the various social housing schemes to a sustained and reasonable level of household saving". In other words housing is a responsibility of the individual whose income has to be adequate to meet the needs. The other part of the housing problem in the state is set forth in table 15.3 in the statistical tables of the document which under the head of slum clearance and improvement shows 1000 tenements construction in 1988-89 and the same number in 1987-88. Against the 2680 slums in Madras city in 1988 in which about 3 lakh families live in 3 lakh habitations, the annual construction of 1000 tenements where 10,000 families could live is the wrong approach to the problem. The Slum Clearance Board should move out of the tenements construction function to the function of improving slums through improved piped water supply, sanitation, roads footpath, and lighting. Even this is inadequate as it covers only another 15 per cent of the families living in the slums. Here the state intervention should aim at a) providing some incentives including margin money for the families to construct their own habitations in which they have shown extraordinary inventiveness and b) improving the economic status and incomes of the slum families which will in part address itself to the problem of housing.

Education and literacy

In *literacy*, the 1991 census shows a good record, with the state being in the second place after Kerala. The literacy percentage of the state has risen from 54.38 per cent in 1981 (68.05 per cent males and 40.45 per cent females) to 63.72 in 1991 with 74.88 per cent males and 52.59 per cent females. The reasons for this improvement during the 10 years need to be studied so that the positive forces can be strengthened in order to attain 90 per cent literacy by the end of the VIII Plan - with 98 per cent for males and 65 per cent of females. The forces in this area operating during the decade were a) the Union government's encouragement and funding of adult literacy programmes through the National Literacy Mission etc, b) the effective efforts of the voluntary agencies particularly the Bharat Gyan Vigyan Samithi and its 100 per cent literacy program-

mes, and c) the increased elementary education provision which had a fall out effect on the adult literacy programme.

On the *school education* programmes, table 12.1 of the Tamil Nadu Appraisal document reports that 4.5 million boys and 3.8 million girls were enrolled in class 1-8 which is 101 per cent of the total estimated school age population, compared to 92.9 per cent in 1981-82. Even allowing for a dropout rate which the government reports at 26 per cent in 1988-89 and 42 per cent in 1981-82, this is a good record because it means that near upon 75 per cent of primary school age children are receiving primary education and the similar enrolment percentage over the 80s has a direct effect on the literacy rate because it reduces the illiterate cohorts joining the ranks of the illiterates, as well as having an indirect effect of educating their parents and providing them with an example of the advantage of possessing knowledge of the 3 Rs.

At this point attention needs to be called to two recent studies commissioned by the Tamil Nadu State Council for Science and Technology which throws light on the question of dropouts, retention and achievement in primary education in 1989-90. One study covering 5 taluks in the districts of Kanyakumari, Tirunelveli, Periyar, Pudukottai and Dharmapuri reports that only about 40 per cent of the children complete primary education without any wastage ; that two out of five children drop out of school without primary education ; that more than half of the children in the late stages of the fourth and fifth classes fail to meet the basic requirements of literacy—(being unable to comprehend a short passage and answer question based on them), so that there is also a hidden component of wastage in primary education ; and that two thirds of the drop outs are not because their parent pulled them out for jobs but for other reasons, including their problems with the schooling process. The other study dealing with the effect of the nutritious noon meal scheme in the Madurai district over the years 1987-1990 states that since the implementation of the nutritious noon meal scheme in 1982, "there has been a dramatic increase in enrolment, attendence and retention of children in the age group 5+to 14+ in the district of Madurai. By 1990, 95 per cent of the village student population of the age group 5+ to 14+ years has been enrolled". But this finding is qualified by the comment "that the registers by the schools regarding enrolment and attendence (on which the study relied) in almost all the schools are boosted to some extent". On academic achievement of the students which is based on tests administered by the team of investigators and about which the report is confident, the guarded comment is made that "the academic achievement of children also shows improvement in the three years under report", with the "achievement means" of boys being higher than girls, that of OC children being higher than BC and BC higher than that of SC/ST children. Each of these groups has been scored. In this connection, one of statistical tables which shows a close correlation between income and achievement is disturbing. The table is given IV

TABLE—IV

Achievement Means of Standard VIII Boys and Girls

Year	Income Groups	Boys	Girls
87—88	A	40,72	37.22
	B	58.30	52.80
	C	64.56	60.36
	D	75.80	63.02
88-89	A	44.10	43.26
	B	60.42	53.08
	C	65 78	61.10
	D	78.24	64.24
89—90	A	46.64	43.82
	B	62,50	53.64
	C	68.36	62.25
	D	78.62	73.82

A—Upto Rs. 300
B—Between Rs. 300/— and Rs. 600/—
C—Between Rs. 600/— and Rs. 900—
D—Above Rs. 900/—

Source : J. K. Pillai : Effect of Nutritious Noon Meal Scheme

These two reports show that the primary education record in the state is not as good as reported by the government and has many points in retention and achievement which need attention.

It is also poor enrolment rates at the middle and high school level at 39 to 40 per cent that is worrisome because the dropping out of about half of those who qualify for that stage represents a rather serious educational and human wastage and deprives the majority of the educated drop outs of vocational skills.

At the university level, the number of universities at 11 and the arts and science colleges at 187 including 27 autonomous colleges in 1988-89 represent the limit for higher education in the state, if the number of graduate and post graduate unemployed recorded in Employment Exchanges set forth in the table below is a guide.

TABLE—V

Graduate and Post graduate job seekers registered in the state Employment Exchanges

	Graduates		Post graduates	
	1988*	1989**	1988*	1989**
Arts	76,393	74,801	27,169	28,769
Science	63,462	66,233	14,612	14,826
Commerce	32,233	35,660	6,526	6,845
Engineering	6,377	6,372	344	351
Medical	1,849	2,944	15	26
Others	28,633	29,243	1,498	1,700
Total	2,08,947	2,15,251	50,162	52,517

* as at 31 December
** as at 30 June

Source : Director of Employment & Training

The above picture of over 2 lakhs graduates including some engineering and medical graduates and over half a lakh post graduates looking for jobs that is disturbing. Surveys have shown some 20 to 25 per cent of those looking for jobs in the Employment Exchanges are not unemployed but those who are employed who are looking for better jobs. Even taking 75 per cent of the numbers above as the real unemployed, it is clear that higher education in the state faces a crisis both from the supply side of producing more graduates and post graduates than the economy demands or can absorb, and from the demand side in that the employment generation of the economy, particularly for the highly skilled personnel, is limited and is not increasing at the rate at which the higher education system produces them. One immediate action available to correct this situation is to stop any further expansion of colleges and enrolments in them for the Eighth Plan period, to give the economy time to catch up with the educated, skilled backlog available. The freezing of institutions and enrolments in higher education proposed is only in relation to the formal system, because higher education facilities are increasingly available in the correspondence courses of the 3 older universities of Madras, Madurai and Annamalai in foundation courses, arts, sciences, commerce, education etc. This is a welcome development and should be used to cut back on the state subsidising of higher education courses in the universities and colleges.

To sum up, the development in the state in 1988-89 and reviewed rather briefly in this note so far refers in the main to the quality of life of its people on which the record is s mixed one. It is good in regard to the demogra-

phic factors, improving in regard to maternal and child care and IMR, it is also on the right lines in literacy and possibly in primary education. It is poor in regard to reducing unemployment including educated unemployment, in water supply and sanitation, housing and higher education. With this mixed record, the policy for the VIII and IX Plans indicated are to intensify state intervention and encouragement in this area (quality life) so that the state can maintain and/or attain for its people the second position in the country in this quality of life area after Kerala. The commodity producing and infrastructural sectors to which we now turn must serve this quality of life area.

Agricultural and allied activities

The agricultural and allied sectors of the economy reported in the Appraisal document present several positive as well as negative features.

On the positive side,

i) the increasing production of foodgrains and non foodgrains in 1988-89 - at 73.29 lakhs for foodgrains and pulses, 2.4 lakh tonnes of sugar, 4.01 lakh bales of cotton :

ii) despite a gradual reduction in area under cultivation for paddy from 24 lakh hectares in 1984-85, 25 lakh hectares in 1985-86, 22.64 lakh hectares in 1986-87, 19.55 lakh hectares in 1987-88 and 18.81 lakh hectares in 1988-89, the yield has increased from 53 65 lakh tonnes in 1984-85, 53.70 lakh tonnes in 1985-86, 56.14 lakh tonnes in 1987-88, 57.04 in 1988-89, with similar decline in area for other crops-millet 12.76 lakh hectares against the target 18 lakh hectares and yield 13.77 lakh tonnes, pulses 12 lakh hectares with an yield of 2.48 lakh tonnes, groundnut 9.62 lakh hectares and yield of 10.84 tonnes.

iii) the yield of paddy has been maintained despite the reduction in area because the yield per hectare has been steadily rising from 2138 kg per hectare in 1984-85 to 2372 kg, 2728 kg, 2872 kg in the following 3 years and 3032 kg per hectare in 1988-89, placing the Tamil Nadu farmers in the third place after the Punjab and Haryana farmers in the country. But there is still a gap of over 13 per cent in yield to be made up, to 3500 kg per hectare, in relation to what is possible.

iv) milk production as reported by the document shows a small increase from 2.8 million tonnes in 1984 to 3.2 million tonnes in 1988-89, giving an annual increase of 20,000 tonnes per annum. It is also reported that 15 per cent of this is consumed by village households and the major part - 72 per cent marketed through the unorganised sector. Against the ICMR requirement of 284 grams per capita per day, the availability has been around 165 grams between 1984-85 to 1988-89, the gap between the ICMR criteria and availability falling from 65 per cent in the early 80s to 42 per cent in 1988-89. There is need not only for some further state investment in cattle development in the VIII Plan, there is also need for allowing the rural milk producers to organise themselves in cooperatives, as has been done so successfully by Anand.

v) there is a similar wide gap between ICMR criteria for per capita requirement of egg at 183 and its availability at 42 in 1988-89. This 77 per cent gap between the requirement and availability seems unbridgable, though since 1984-85 it has fallen by 10

points at 87 per cent. The other allied areas fisheries, forestry and irrigation—present a series negative feature and are therefore treated under the negative features section.

On the negative side, there is a long and dismal set of issues facing the state.

i) The contribution of agriculture and allied activities to the Net State Domestic Product (NSDP)—state income as set forth in the last 3 NSS Rounds shows it declining year after year from 28.47 per cent in 1984-85 to 24.35 per cent in 1988-89. Development theory holds that with higher economic development, the percentage share of agriculture and allied activities in the economy declines, that the percentage of the country's workforce engaged in it declines to a single digit figure as in the US at 4 to 5 per cent, while the tertiary sector and the workforce engaged in it rises dramatically which is held up as a model of economic development. But for India where the majority of people are poor with an unsatisfied demand for food, clothing and other wage goods, any reduction in the share of the commodity producing sector is disastrous. This falling share of the primary sector in the state's NSDP is a negative factor. The decline in the rate of contribution to NSDP of the primary sector has made possible by the 8 12 per cent increase of tertiary sector between the 2 years—the tertiary sector covering—trade, hotels, restaurants, transport, storage and communication, banking and insurance, real estate, house ownership, business services, public administration and other services. The growth of the tertiary sector, except for transport and communication, at the expense of agriculture and allied activities is due to the pull of the market, and as that sector produces no commodities to meet the unmet demands of the people, is a negative factor.

ii) Agriculture and allied activities are still dependent on the monsoons. The most important orecast during the year determining the direction of agriculture and allied activities in all their various aspects is the monsoon. That determines the area of both irrigated farming and rainfed cultivation, it determines the storage levels in the hydraulic reservoirs which make available power for the farmers, it determines the fodder available for cattle and hence the meat and milk supply, it also influences the volume of the plantation crops and the social forestry prospects. In other words, the monsoon is the determinant of the level of living in the state. In 1988-89 the south west monsoon was satisfactory at 22 per cent above normal but the north east monsoon was deficient at—51.3 per cent and together with summer rains, give a—25 per cent below normal for the year. 1988-89 was consequently not too unsatisfactory a year for the rains but it was the determining element. Despite all the state and private investment and the various biotechnologies and other science applications, Tamil Nadu agriculture is still a gamble in the monsoons.

iii) The continuing decline in the area under foodgrains, particularly paddy referred to earlier, compensated by an increase in the per hectare yield, cannot continue indefinitely. The reduction in the area cultivated under paddy has already changed the cropping season. In the seventies, 20.7 per cent of the paddy production was under kuruvai, 68.3 per cent under samba and 11 per cent under the summer crop. By 1988-89, however 10.55 per cent is under kuruvai, 79.3 per cent under rabi and 10 per cent under the

summer crop. Further it is only partly true that the reduction in the paddy acreage was due to erratic monsoons which led to the late opening of the Mettur reservoir. An important reason for the area decline in paddy cultivation area from 24 lakh hectares in the first half of the 80s to 18 81 lakh hectares in 1988-89 which is a decline of -3.74 per cent over the previous year should be placed along side of the area under sugarcane increase by 11.28 per cent in 1988-89. Sugarcane is a water guzzling crop and the expansion of its cultivation area at the expense of paddy is a negative factor and points to the need to adjust the procurement prices policy to deal with this serious anamoly. Another food crop which declined even more sharply in 1988-89 is—essential for the protein needs of the large vegetarian and poor majority of the state. Pulses declined by—50.50 per cent against the anticipated level of 5 lakh tonnes. Pulses need to be grown in irrigated areas to increase its yield and this also may involve some cut in sugarcane production. Again cotton though recording a 7 per cent increase in area of cultivation records a —8.24 per cent decline in yield and groundnut which shows a decline of 2.83 in area over the target records an ever sharper decline in yield at-16.42 percent The broad conclusion is that both food grains crops and non foodgrain crops have performed poorly in area/yield in 1988-89, continuing this negative record over the last 5 years. in this connection the apologetic and defensive comments on the foodgrain position in the Appraisal document is to be regretted: this refers to such statements as "the pace of growth in the latter five year period was as good as on all India" (it was as bad as all India), or "the state's share in food grain production at the all India level had been maintained at 4.9 per cent[9] over looking the fact that the 1981 census shows Tamil Nadu's population increasing at 17.50 per cent and the 1991 census 14.94 per cent[10]. This kind of defensive comments runs throughout the document.

iv) There is a serious decline in the HYV area for both paddy (from 23.68 lakh hectares in 1984-85 to 17.97 lakh hectars in 1988-89 and millets (from 11.13 lakh hectares in 1987-88 to 8.44 lakh hectares in 1988-89). There is no explanation for this except some rationalisation about the decline in gross cropped area in paddy and wide fluctuations in the area under millets.

iv) Another more seriously negative feature reported in the Appraisal document is in regard to the consumption of fertilisers, and here again the seriousness of the issue is judged by the language used. The seriousness of the issue is that in a country where fertiliser is in short supply and has to be imported with the diminishing foreign exchange resources, in the five year 1984-85 to 1988-89 consumption is in excess of the estimated requirement as the table below shows:

TABLE—VI
(lakh tonnes)

Year	Requirement	Consumption	Percentage of excess consumption
1984-85	6.05	6.90	+14.05
1985-86	6.35	6.68	+5.20
1986-87	70.00	6.72	—4.00
1987-88	7.35	7.41	+0.82
1988-89	7.70	7.68	—0.26

Source : Department of Agriculture

Does the excess consumption over the estimated requirement indicate the waste in fertiliser use, such as the use of fertilisers in dry farming areas or in dry years reported by the District Agricultural Officers. If this is so, there is no reason for the satisfaction expressed in the document on the wastage in the statement : "the consumption level as it stood in 1988-89 (7.68 lakh tonnes) was an all time high reach" (sic!). The saving fact is that over the years that about 70 per cent of the fertilisers are made available by the private sector, (so that the major wastage must be from the cooperatives and government supply sources). Another worrisome element is that Tamil Nadu's per hectare consumption of pesticides is highest among the 15 major states as table 62 shows. This is not a matter for self congratulation as is found in the report because there is no sign that there is any understanding of the enviromental and health dangers involved in the large scale use of the pesticide nor any action taken to counter them.

vi) The crop loans made available to the weaker sections—covering small and marginal holdings do not seem to tally with their numbers but follow the area and size of holdings as the table below shows.

TABLE—VII

Classification	1976-77		1979-80		1985-86		Disbursement of crop loan to 1 & 2
	Number of holdings	Area	Number of holdings	Area	Number of holdings	Area	
1. Marginal (Below 1 hectare)	64.6	21.1	69.7	26.7	71.4	26.0	1985-86, 1986-87 54 57
2. Small (1 to 2 hectares)	18.4	20.8	16.8	22.2	16.3	22.7	1987-88, 1988-89 60 60

Source : Director of Statistics

The disturbing features of the above table are: i) the number of marginal holding increasing from 64.1 per cent in 1976-77 to 71.4 per cent in 1985-86 along with a smaller increase in the area of their operation from 21.1 per cent to 24 per cent in 1985-86 which means that the operational area of the marginal farmer is getting smaller over the years: ii) while their number is increasing the credit disbursed to them is not increasing in equal proportion. The inequity in land distribution and credit availability is a feature of the state's agriculture and allied occupations.

vii) Fish production records a continuing fall every year from 4085 lakh tonnes in 1984-85 to 3610 lakh tonnes in 1988-89. This is due mainly to the sharp decline in inland fish production (by 50 per cent in 5 years) and which is in the hands of the farmers and the rural people and within the limits of the water availability should be turned around. Even more disturbing is the continuing decline in per capita fish consumption in the state by around an annual average of over 5 per cent, resting at 6.72 kg in 1988-89. This source of food nutrient could be available to the poor - the marginal farmer and the landless labour. That anyway is the hope of the intense inland fish cultivation practised in 16000 hectares and acqua plosion, using the chinese pattern of fish hatcheries to attain the goal.

Viii) the forestry area is one of the weakest in the state. In 1987-88 the official report is that there is some increase (32,000 hectares) in forest cover from 22.23 lakh hectares in 1983-84 to 22 55 lakh hectares in 1987-88 increasing the percentage of forests to the total geographical area 17.10 to 17.34 per cent. The detailed break down of this figure given by the Conservator of Forests is: Reserve forests 78.69 lakh hectares, reserved lands 3.25 lakh hectares and unclassified forest 0.61 hectares. In reality, what is needed is data from the Remote Sensing Agency. At the national level, the National Remote Sensing Agency of the Department of Space reports that the real forests in the country with more than 10 per cent tree cover decreased by 50 per cent in the 70s. What is the effect of our development programmes of clearing forests lands for plantations, for refugee settlement, for industrial and irrigation projects - on our forests has not been investigated. But that it is serious seems certain. Similarly the encouraging data given on Social Forestry in table 31 of the report must take account of the fact that farm forestry because of its economic implication benefits mainly the large farmer and faces the problem of heavy leakages which this Institute's investigation brought to light in 1985.

ix) In regard to irrigation, it is probably true that the state has "exploited to the brim - about 80 per cent of the ultimate potential". in the sense that the scope for new major or medium irrigation being nil, as the Appraisal document states. Even minor irrigation works face a limit in view of the rapid rate at which the groundwater level is declining. It is held that 70-80 per cent of groundwater is already in use. Both the recurring droughts and the prolonged dry season is resulting in heavy drawals of underground water both for agriculture and for drinking purposes. The drawals are so heavy that in the coastal areas, salt water from the sea is seeping into the fresh water underground channels. Under these conditions what is now needed is concentration on the efficent and

effective use of the fast declining water sources on which the Appraisal document says nothing. There is the usual data on the irrigation potential created and used (Tables 4 & 7 of chapter 5—irrigation). Of course the concept of irrigation potential is useful in a negative sense, as it points to the wastage of the investment in irrigation—major and minor. Table 4 in chapter 5 and table 5.4 in the statistical tables show that over 25 per cent of major and medium irrigation projects potential and 35 per cent of ground water potential have not been harnessed. Hence what is needed is : a) substitutional irrigation under which minor irrigation works are developed in the villages of major and medium commands: b) an irrigation advancement plan under which i) the uncompleted 30 per cent of the major and medium irrigation projects are completed atleast 1 or 2 years early, as well as, ii) a water distribution system net work to deliver water to the farmer's field in one of the crop seasons. This means that the efficiency of the irrigation investment in the state will not be measured by the potential created but by the number of watering per season. Can we have data on the number of waterings received by each farmer? Further the economical use of water would also be ensured by further extension of drip irrigation. Can the use of drip irrigation be made obligatory for large and medium farmers who according to table 3.5 in the statistical tables form 12 per cent of all cultivators, having 50 per cent of the land.

Industry and infrastructure

The 1988-89 industrial scene in Tamil Nadu must begin by referring to the series of efforts made by the government (at first under President's rule and later under the elected government) to revive industrialisation of the state. As pointed out in last year's review, in 1988 a review of the state's industrial record showed that in the preceding 10 years, some Rs. 150 crores of capital had migrated to other southern and other states. It is not the migration of capital from Tamil Nadu that was worrisome, but in contrast the stagnation of the industrial scene in the state that was a matter of concern. Unfortunately the government gave prominence in their publicity to their welfare measures costing Rs. 500-800 crores per annum, listing the midday meal scheme, the grant to the newly weds from the poor sectors, the cancellation of the debt of the farmers to the cooperatives, the free education right upto the university and in case of the backward, SC and ST class including engineering and medical education etc. In fact, the manifestos of every party (DMK, AIADMK, Congress, CPM, CPI etc) lay emphasis and give wide publicity to the large number and new welfare measures planned if elected to power with almost nothing on industries. Hence starting in May 1988 and going on to January 1989 and again in June 1989, a series of incentives and other measures were announced. As pointed out last year, it is still too early to assess the results of these efforts, but already in February 1991 some outside investments by large houses—Birla Tata, JK, ITC, Thapar and Khaitan - were attracted, resulting in finalising some 24 major and medium plants, with an investment of Rs. 300 crores. The major problem faced by the new industialists is that the government was not in a position to deliver the promised power supply, at a lower price. The enterpreneurs were more anxious to have power supply on a continuing basis

without any power cut or load shedding. The Appraisal document attributes this failure to ensure continuous (and concessional) electricity to the new industries because of the power cut. 1989 was a very bad year from this point of view. The 30 per cent cut at the beginning of the year was increased to 40 per cent in March and 60 per cent in April, due to interruption in the supply of coal to the thermal plants and the low level of the depleted hydel reserves. This is in part true and will be further analysed later under the infrastructure sector, but the major reason for the various concessions and subsidies announced from time to time not leading to the rapid industrialisation of the state, like Maharashtra and Gujarat, is because our industrial policy and priorities lacked direction and perspective. This can be seen in the industrialisation not being related to the agricultural resources of the state: while the state is the second largest in the country in the number of spinning mills, it has to import about 60 per cent of the cotton requirement of the mills from other states: on the other hand despite having flourishing bananas, mango and other horticultural raw materials which can still further be developed, it has no fruit processing or fruit preservation plant. ASI shows an actual decline in the number of factories in the areas of food product manufacture from 22 per cent in 1985—86 to 21.84 in 1986—87. The undesirable expanding of sugar factories in the state which is taking place from 821 in 1988 to 950 in 1989 has been earlier referred to.

This may also be the major reason for the somewhat erratic growth rates recorded by Tamil Nadu industries and its 3 sub sectors as the table below shows: (this assumes that these aggregate growth rate are real indicators of the performance of industry and its sub sectors).

Table VIII

Percentage : base 1970 = 100

Year	Mining	Manufactures	Electricity	Total
1980	26.4	4.9	7.4	5.7
1981	19.4	11.1	6.4	10.5
1982	10.2	4.7	10.5	5.8
1983	0.2	—7.3	—13.8	—8.2
1984	11.1	15.8	38.1	19.0
Annual Average	13.5	5.8	9.7	6.6
1985	1.3	12.5	—0.6	9.1
1986	—0.7	4.9	7.4	5.2
1987	1.6	2.6	10.6	3.9
1988	3.3	10.7	25.4	13.1
1989	18.5	2.6	6.3	1.2
Annual Average	4.8	6.5	7.3	6.5

Source : Basic Industrial Statistics, Tamil Nadu 1989.

The table throws up some important issues. First, it will be noted that the years of high growth rates - aggregate or for manufactures - are based on low rates of the preceding year. 1984 records the highest rate 15.8 per cent for manufactures on the basis of - 7.3 growth in 1983. 38 per cent in electricity on the basis of - 13.8 growth in 1983, 19.0 per cent aggregate against -8.2 per cent in 1983, and similarly the second highest rates are recorded in 1988, 13.1 per cent in aggregate against 3.9 in 1987, 10.7 in manufactures against the previous year's 2.6 per cent, and so on with regard to 1981 and 1985. In other words the table shows little growth in reality in industry: all the high rates are only recovery rates. This also means that there is no reason for the Appraisal document to be disheartened as when it states "that the growth rate in industrial production had come down from an impressive 13.1 per cent in 1988 to a low 1.2 per cent in 1989". As the former was a recovery rate, the latter was simply a correction rate. Second, the growth rates are an aggregated quantity and in manufactures table 6 of chapter 6 of the Appraisal document shows is based on a single digit. From this point, table 6.7 of the statistical tables headed the results of the Annual Survey of Industry groups-1986-87, is preferable because it gives the actual net value added for each of 97 groups of manufactures. If placed alongside of the similar value added results of 1985-86 and earlier years, it will be possible to arrive at the growth rate for each manufacturing group at the 3 or 4 digit level, which will give a more accurate picture of the status of manufactures.

Earlier reference was made to the need for Industrial policy in the state having some focus priorities. In view of the fact that most state public sector undertaking are making losses year after, which the Comptroller and Auditor General calls attention to and which has been referred to in previous annual reviews of the economy by the Institute[11], and to which the Appraisal document calls attention in table 34 in chapter VI, which the further information that the net losses are increasing every year, from —Rs. 4881 lakhs in 1986-87 to —Rs. 6717 lakhs in 1987-88, it has now dawned on the government that it should not itself undertake industrial / manufacturing activities for which neither the government nor its civil service staff is competent. And so a good development has been for the state to disinvest from a number of industries. The decision is being put into effect slowly and gradually to take the political parties and trade unions along. The state's VIII Plan provides for a modest Rs. 500 crores for industrial development, as a means of guiding and stimulating industry and not operating industries itself. From 1990 the policy of disinvestment by the state is gathering force and will be reviewed in the next issue.

Finally the state of sickness in the state's industry is alarming. The Appraisal document reports that as at end of December, 1987 - 107 non SSI units were sick with outstanding bank credit of Rs. 228.90 crores. Over 70 per cent of the sick units are in the engineering, textile, chemicals and paper industries sectors. On top, there are what the RBI calls weak units in the non SSI groups, comprising units which record cash losses and whose accumulated losses are 50 per cent of their net worth. They are potentially sick units but remedial action now can save them. In this category are 45 companies in the state with

outstanding banking credit of Rs. 70 crores. It is in the small scale sector that sickness places Tamil Nadu first among the states and the second highest in the bank credit outstanding. There have been enough studies by RBI and by the state authorities on the causes of sickness and the means of rehabilitating them. The first action now is to close the real sick units-non SSI and SSI-by sale, merger or being shut down. There is resistance both in the legislature and more strongly from Trade Unions, but there is no other remedy for the unviable units. Their lying closed and being taken over by the state is no solution. That compounds the temptation of large units who cause the sickness and use the easier entry into the SSI sector to misappropriate bank and company resources.

Infrastructure

Industry and agriculture are closely and increasingly dependent on *power*. The data published by the Tamil Nadu Electricity Board shows that in 1988-89 in regard to i) capacity creation, ii) electricity generation and gross power availability and iii) per capita availability there are increases and improvements in the year as in previous years. 1988-89 represented the highest power availability in 80s at 17,618 MW. Over the eighties, there has been a somewhat steep reduction and decline in the share of hydel power capacity from 50.4 per cent in 1979-80 to 37.7 per cent in 1988-89, with the resulting rise in the share of thermal power capacity from 49.6 to 55 5 per cent. Both forms of power face problems and limitation, The hydel generation in every year depends on the monsoons. Because of the good south west monsoon in 1988–89, hydel generation increased by 53.5 per cent in 1988—89 at 33 53 MW over the previous years, when the generation was a low 2884 MW. As far as the thermal generation is concerned, there is the problem of the sources of coal supply for the thermal plants being far away in the state, with steep variation in the quality supplied, depending not only on the condition in the mines but also the state of rail transport. The Singereni source which is close to the state is in a permanent state of labour unrest, so that the plants have gradually got delinked from this uncertain source. The state is also dependent on three major union sources of supply—Neyveli with installed capacity of 776 MW in 1988—89, Kalpakkam atomic plant with capacity of 350 MW and the National Thermal Power Corporation, Ramagundam with 353 MW. In 1988—89 as in previous year not only is the power available inadequate to meet the demand, resulting in power cuts, there is also serious fluctuation in its availability, resulting in load shedding. The atomic source which the government is expanding with a second plant at Koodankulam carries many human, ecological and economic costs which the people in the state and the state government cannot afford. Further even the experience of power availability from Kalpakkam was that it was closed on a larger number of days for repair than the days of operation. The way forward for the state's power scenario is i) to concentrate on supplying power to industry and agriculture as a first priority followed by the urban household demand: ii) to develop quickly bio mass as the main power supply source for the vast rural areas ; iii) to restrict industrial power supply to industries which are not power intensive : iv) to develop on an increasing scale solar and wind energy, which are now becoming available in the state for communications and farming, and v) above all to

adopt a life style so that what power is available is shared equitably between urban and rural areas, between the well to do and the poor sector of society.

Finally on communications, the Appraisal document provides some information on the roads in the state. As far as the districts are concerned, the government and panchayat union and panchayats have not provided the minimum of roads surface in 6 districts—Dindigul Quaide—Millet (1804 km), Chidambaram (1204 km), Kanyakumari (950 km), Pasumpon Muthuramalingam (1669 km), Pudukottai (1669 km) and Ramanathapuram (1285 km). These are the data for 1989 and these are districts where funds should be made available as a priority to panchayat unions. Table 18.12 in the statistical tables shows that about 40 per cent of villages (9000) have no all weather roads and are thus not able to participate in the states' main activities.[12] One problem that is faced in this matter is that PWD engineers are asking for black topped roads for the habitations which have no connecting roads at all. They should be provided funds for good mud topped roads as a priority in this matter of road building.

Conclusion

This brief over view of the Tamil Nadu Economy in 1988—89 leaves one in general agreement with the broad conclusion set forth in the Institute's publication in 1988, Tamil Nadu Economy, Performance and Issues exprssed thus : "The account of the development of Tamil Nadu seen in the preceding chapters is a mixed one with some bright spots, many dark patches and different shades of gray all over.......'Economic growth in the state will have to be stepped up by stimulating economic activity in different sectors of the economy"[13], starting with agriculture which has been holding back the development of the economy.

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Annex to : Some Comments on Tamil Nadu : An Economic Appraisal 1989

Relative Importance of the Main States in India Agriculture and the Relative Importance of Agriculture within each State

	Shares in All-India Domestic Product Originating in Agriculture (average 1984/5—86/7)	Share of Agriculture in State Domestic Product (average 1984/5—86/7)	Growth of State Domestic Product Originating in Agriculture (1960/61—1986/87)
North	8.4	43.8	4.0
Haryana	3.3	43.8	3.7
Punjab	5.1	43.8	4.2
Uttar Pradesh	12.8	38.0	2.3
East	23.0	41.9	2.2
Assam	2.8	41.9	1.3
Bihar	8 0	45.3	1.4
Orissa	4.2	55.2	4.2
West Bengal	7.9	34.8	2.5
Center	11.3	42.9	2.5
Madhya Pradesh	6.2	40.1	1.7
Rajasthan	5.2	46.7	3.6
West	11.5	22.8	2.0
Gujarat	4.2	25.0	2.2
Maharashtra	7.3	21.7	2.0
South	17.6	30.6	1·5
Andhra Pradesh	6.6	36.6	1.8
Karnataka	5.0	36.9	2.7
Kerala	3.1	35.9	0.9
Tamil Nadu	3.0	16.9	—0.03
Total	84.6	35.0	
All India	100.0	34.5	2.3

Source : World Bank 1991 Country Economic Memorandum Volume II, using data from GOI, CSO, Estimates of State Domestic Products, various issues.

Summary of Discussion

The July development seminar was conducted on 25th of July at the Institute. The Chairman of the Institute Prof. Malcolm S. Adiseshiah was the author of the paper on "Some comments on Tamil Nadu : An Economic Appraisal" and the seminar was chaired by the Member Secretary, State Planning Commission, Mr. Inbasagaran.

At the outset, the author recorded his concern over the delay in publishing the 1988-89 document after the lapse of 25 months which nullifies the very purpose of the preparation and presentation of the document and the discussions thereon. The author invited the attention of the planners to avail the assistance of the non-Governmental institutions like CMIE and MIDS in bringing out the document on time and suggested that the document should form part of the budgetary exercise to help members of legislature to discuss the features of the document in the House.

On highlighting the very purpose of the document, the author pointed out that the plan exercise in itself is an ongoing process and the absence of any reference to the plan goals of the Seventh plan in the document for 1988-89 (which is the penultimate year for the State's Seventh plan) is a serious lacuna to be taken care of.

As to the substantive part of the document, the author appreciated the efforts of the officials in bringing out a useful record of assessment of performances, although late by two years. The author raised his doubts over the effectiveness of the analysis of growth rate statistics towards assessing the performance of the economy as they are gross in nature and in that sense, an abstraction and often misleading.

In addressing the problem of unemployment, the author recorded his empuzzlement over the prevalence of the slow rate of decline in unemployment along with the low average annual growth rate of population during the decade 1981-91.

In improving the 'quality of life' and assessing the social betterment, the author called for more accurate and subtantial social parameters in the plan document to reflect the current situation. On the housing sector it was identified that the data on private housing activities (which is a major investment) are not provided and pointed out to not fixing-up the responsibilities with the officials concerned as the prime reason for this gap.

As regard to performance of the department of education, the author was surprised to find the results of State's intervention in primary vis-a-vis higher education in opposite directions. Citing the two recent studies carried out by Tamil Nadu State Council for Science & Technology, the performance of schemes in reducing the dropouts from the schools are far from satisfactory. At the same time, it was observed that the State intervention in the higher level education is quiet encouraging.

While summing up, the author argued for state intervention in improving the 'quality of life' in a greater way in the future. Coming to specifics, in terms of performances of major sectors, he drew attention towards the fall in the area under cultivation in agriculture and the non-performance of the State Public Sector Undertakings in industry. The author voiced his doubts over the competence of the proposal for privatising the power sector which is on the cards.

The Chairperson in responding to the views of the author, gave the assurance that the next plan document which is under preparation will be placed along with the 1992 budget and highlighted the scheme of the plan document briefly. It was pointed out that instead of doing an assessment of all sectors, a thorough analysis of one sector at a time on a continum basis was suggested in this context. With this the discussion on the paper was intitiated.

It was observed that the rationale for posing slow rate of decline in unemployment with that of low average annual rate of growth of population by the author is questionable. The response was that it was done with the corresponding European experience in this area in mind. The issue of discouraging the non-utility courses at the collegiate level is not subtantiated by the unemployment figures presented by the department of employment and training, was also brought out.

One of the participants suggested that the data on the performances of different sectors should be provided on a continum basis to facilitate comparability and the suggestion was well received.

Concern over the fall in agricultural production especially, with respect to the increased gross value of production with a low net value of production was expressed. It was pointed out that there is neither academic nor departmental interest shown in this direction. The absence of a clear-cut agricultural policy (in the context of depleting ground water position and theCauvery water-dispute on the surface irrigation front) was recorded. As a wayout, the agro-climatic parameters can be the leading light was suggested as the criterion. The response was that the policy is to encourage horticulture activities which are not water-demanding is being persued.

The reliability to whole system of agricultural statistics of the State is questioned in terms of its presentation, its break-ups, the gaps and hence a thorough review was called for.

In responding to the questions raised, the chairperson admitted the gaps in the departmental statistics and briefly mentioned the various steps taken to plug the gaps. He welcomed the idea of availing the help of the institutions like MIDS in bringing out the annual plan documents more effectively and timely in the future.

The author in his response to the questions raised recorded his concern over the sluggishness in agriculture and long-list of non-performers of State PSUs in industry.

As a concluding note, the author expressed his empuzzlement whether to advocate democratisation or privativation in the context of State intervention.

S. THIRUMALAIVELAYUTHAM

At a condolence meeting held in the Institute on 27/7/91 at 12 noon, members recalled Dr. V. K. R. V. Rao's immense contribution to the field of economics and his services as a teacher, researcher, vice-chancellor, minister, and Institution builder.

The members of the Institute sent their heartfelt condolence to the members of the bereaved family.

July 31, 1991

S. Neelakantan
Director

Statement of the Workshop*

Preamble

The Twentyfirst Interdisciplinary Research Methodology Workshop on Management of Renewable Energy Sources organised by the Madras Institute of Development Studies in collaboration with the Indian Council for Social Science Research was held at the National Institute for Rural Development, Hyderabad, during June 5 - 8, 1991. There were 24 participants representing the disciplines of economics, ecology, agriculture, engineering, geography, home science, management and urban planning. This workshop, the third and the final in the series on "Management of Renewable Resources" focussed on issues concerning energy, particularly for the rural sector, while the earlier two workshops had dealt with management of land and water resources.

Energy in different forms is a pre-requisite not only for meeting the basic minimum needs, but also for economic development of our rural and remote population. Currently, a large fraction of the rural population is too poor to buy what are sometimes called "conventional", and at other times as "commercial" energy, viz. energy such as petroleum products or electricity. The rapid rate at which fossil fuels are being depleted, and the escalating costs of procuring or generating such conventional energy sources are factors which force us to examiue more carefully the potential prospects of renewable energy sources such as bio-mass, animal and agricultural waste, as well as tapping the practically infinite sources such as solar energy (used directly or after conversion into other forms such as heat and electricity), wind energy, ocean currents, etc.

The possibilities of decentralised energy generation when renewable sources are used without the excessive costs associated with transmission and distribution inevitable in the case of centralised thermal and hydel plants, is a particulary attractive feature, in the context of the need to meet the diverse forms and levels of intensity at which energy requirements are to be met in the widely dispersed and remote rural locations.

The energy requirements in the rural sector are largely for domestic use (cooking and lighting) and for agricultural operations. The energy requirements for agricultural operations are of two kinds : a) energy inputs in the form of seeds;

*Statement of the Twentyfirst Inter disciplinary Research Methodology Workshop held at NIRD, Hyderabad, June 5-8, 1991.

chemical or organic fertilizers/manures; and b) energy required for the mechanical operations such as ploughing, pumping water, harvesting, drying etc.

Most of the energy requirements for domestic needs as well as that required for the mechanical operations described above are met from renewable sources such as bio—mass, agricultural and animal wastes, and human and animal labour. Most of the requirements such as fertilizers are met through energy sources which are non—renewable.

Net gains in energy productivity, by which we mean the increased food, fodder, and fuel production to meet the basic minimum needs must be the goal of renewable energy programmes.

This is possible through :

(a) judicious management of the energy inputs including wastes, and (b) improvements in the efficiency of the end—use devices which convert energy inputs into useful forms of energy such as traction, heat or light.

It was this premise which was the undercurrent of the thirteen papers discussed at the workshop.

Energy Requirements and Availability in Rural Areas

Fuel for cooking is by far the most important end—use in rural areas. Concern has therefore centred on the availability of fuelwood at the national and state levels.

A study of fuel usage by households in rural areas of Tamilnadu found that half of the requirement is met by wood, a third by agricultural residues, and the est by dung cake in villages abutting reserved forests of Tamilnadu, illegal extraction of fuelwood is an estimated 7 lakh MT per year.

Clearly, this level far exceeds personal consumption needs, and the sale of the surplus is a means of livelihood. Presumably, a substantial portion finds its way to urban areas. While it is theoretically possible to produce the needed fuelwood from social forestry plantations, such a strategy should concurrently address itself to the problem of providing alternative source of employment/income for those engaged in this activity.

Although, the extraction of fuelwood by headloaders is by no means the only significant cause of deforestation, there is the danger that firewood may become a non—renewable resource if the trends in deforestation continue. On the positive side, the high consumption of *Prosopis* in Tamilnadu indicates the potential of that species to meet the fuelwood needs at very low cost, since it proliferates rapidly even on poor quality land. Wood needs for brick kilns and other industrial uses can be met from social forestry plantations. However, such a policy may be undesirable if common lands which provide free fuelwood to the rural poor are diverted for commercial purposes.

The extraction of fuelwood from forests is particularly important in ecologically vulnerable areas such as the Nilgiris. Another study of energy usage among households in Nilgiris indicates that firewood is the largest contributor of energy, and is mostly used for cooking. A close relationship was also observed between the consumption of cereals and firewood; the cold climate due to the elevation of the Nilgiris leading to higher cereal and firewood consumption comp-

ared to the plains. Urban areas in the district which have alternative energy sources had less reliance on firewood.

Suggestions made on the basis of the study include : (a) development of fuel-wood plantations to meet the firewood need; (b) nutritional supplement to make up for the deficiencies in the diet; and, (c) treatment of dung in biogas plants to generate gas, and produce a slurry with the required nutrients for use as manure.

Among renewable energy sources, there is much greater data on the availability of biomass, particularly firewood. Similar studies of availability through surveys and simulations are needed in other areas. Also, firewood being a "conventional" energy source, the issues revolve around *reduction* of usage from an environmental perspective, rather than promotion of usage which would be the case for other renewable energy sources.

The macro level as well as micro level planning for meeting energy requirements can be aided by a variety of techniques and methodologies. One such exercise illustrated how an optimisation model (linear programming) could be used to decide on the extent of afforestation needed in different categories of land and at different seasons in order to achieve objectives such as meeting the fuelwood demand at minimum cost.

While optimization, simulation and combinations of such techniques can be meaningful in the search for action programmes, great care must be exercised in making assumptions about the various components of the model used, as well as in estimating the parameters of the model. The sensitivity of the solutions in the form of action plans for different assumptions and values of the parameters must be examined carefully. In any case, such exercises can atleast focus the attention of the planners and policy makers to different options for action, and enhance the understanding of the dynamics of the relationships among aspects such as changes in cropping pattern, differing qualities of available land, etc.

Emerging Renewable Energy Technologies

The technological options available for harnessing renewable energy sources include :

a) Solar photovoltaic technologies which have high reliability and are easy to maintain;

b) biogas generation through use of animal and plant wastes;

c) technologies based on biomass conversion to heat energy either by direct combustion or through gasification;

d) harnessing wind power and small scale hydropower in locations with the required conditions.

Integration of different technologies in a complementary manner is needed

Many emerging technologies are technically viable, but may not be cost-effective without a subsidy because of the lack of scale economies. At the same time, we cannot ignore arguments that large and continuous subsidies may devalue the credibility of the option and prevent gradual adoption. However, rationalisation of existing conventional fuel prices may provide an incentive for the development and acceptance of these technologies. The successful transfer of

technologies requires greater awareness among the rural poor, local management systems such as village committees, and trained manpower for operation and maintenance which may be in short supply in remote rural areas.

Besides the possibility of emerging technologies becoming economically viable through measures such as the above, they have the potential of improving the status of deprived groups of the society such as women. For instance, they improve the quality of life of women by freeing them from the drudgery of collecting fuelwood or by providing smoke—free kitchens.

Two case studies of implementation of these new technologies provide some insight into the potentials and problems of the development and adaption of such options. The experience of decentralised electricity generation through community-based biogas plants indicates that the cost per Kw of installed capacity is lower vis-a-vis nuclear power generation. The economic analysis of generation of electricity through wind farms and feeding into the central grid, shows that the project has a positive net present value. While unequivocal conclusions about economic viability cannot be made based on such pilot projects whose replicability is yet to be proven, the point remains that careful evaluation of such options deserves to be undertaken, in order to give a chance for renewable energy options to play a significant role.

Management and Institutional Aspects

It is important to alter the current attitudes of policy makers and planners, who consider renewables to be an insignificant supplement to conventional energy sources such as coal, oil and electricity. A major step in gearing up effective renewable energy programmes is to convince the top echelons of the energy policy makers through energy accounting based cost-benefit analysis, that renewables have a major role to play. At the same time, efforts must begin, to develop expertise and skills at various levels such as the state, district, block and panchayat, to absorb increased allocation of resources for harnessing renewable energy.

Unless *institutional arrangements* are developed, the most careful planning be it at the micro level or at the macro level, will not guarantee the success of any large scale programme for the harnessing of renewable energy sources. The experiences of a national level effort such as the National Project for Biogas Development, as well as studies of micro level projects in Andhra Pradesh and Gujarat clearly illustrate this seemingly obvious, albeit often neglected aspect.

An analysis of the manner in which the National Project on Biogas Development was implemented suggests that the project did not realise the desired objectives because :

a) the implementation was left to the bureaucratic agencies already involved with many other programmes ;

b) there was no proper post-intervention services to help maintain the biogas plants and solve technical problems ; neither had any local expertise been created through appropriate training ;

c) the R & D was laboratory oriented and the conditions on

the ground had not been taken care of in the design of the plants ; and,

d) the target beneficiaries either could not realise the expected benefits because of the lack of the raw material itself (dung) or had not been convinced to accept the new technology.

The implementation of a renewable energy programme (*Urjagram*) in a tribal village near Hyderabad was evaluated over a 6 — 7 year period. The introduction of renewable energy hardware did not by itself bring about improvement in the standard of living of the people. The implementing agencies tended to be obsessed with targets and neglected the proper functioning of the programme during implementation.

The programme in the study area was imposed on the people and their demands/needs were not taken into account. Further, the people were not actively involved. There was no coordination by the several agencies involved in the programme, and they did not take advantage of voluntary organisations such as the YMCA, which were familiar with the needs of the people.

Studies of micro-level efforts in Gujarat reveal that major current weaknesses must be removed if renewable energy programmes for rural areas have to succeed.

a) The haphazard, and unreliable information about the energy consumption and resource availability of the target areas must be replaced with carefully gathered information. The participation of the community in gathering information may have the advantage of getting realistic estimates as well generating motivation for the programme.

b) Provision of effective and readily accessible maintenance services for the equipment, directly by the implementing agency in the initial phase, and through properly trained local residents in the long run, is a must.

c) Development of effective local monitoring teams which prevent the misuse/abuse of the equipment or the energy generated should also be given top priority.

d) The temptation to thrust technologies which the community cannot afford on their own must be avoided. It is better to limit the provision of free inputs to the minimum and introduce technologies for which the beneficiaries will be willing to pay atleast some nominal charges. If the priorities of the beneficiaries (such as the need for drinking water or fuelwood) are properly ascertained, the chances of sustaining the motivation of the beneficiaries to adopt the programme can improve.

e) The implementing agencies should not be guided by their value systems such as imputing opportunity cost for labour spent in gathering fuelwood, or the inconvenience and health hazards of inefficient traditional chulas and conclude that the beneficiaries will be guided in the same way in accepting the new technologies. Considerable effort in terms of education, demonstration etc. are needed to "sell" the new technologies

and products to the target beneficiaries.

f) The role of the voluntary agencies must be limited to that of being catalysts and facilitators rather than being the implementors or delivery agents. The latter responsibilities must be that of the local administration, be it the panchayat or special task forces explicitly formed for the purpose of delivering the programme.

The studies also show that where the above strategies have been followed, the programmes have been relatively more successful.

Energy Flow in Rural Ecosystems/ Productive Agriculture

The demand for energy in the rural sector is largely for productive agriculture and for domestic needs such as cooking and lighting. A study of *energetics* in a village in Karnataka revealed the high energy intensity of modern agriculture. Traditional energy sources such as manure contribute a minimal amount to the total energy used. The argument is often made that increase in agricultural productivity and rural incomes is possible only by increasing energy intensity of inputs. It is not clear if such increase in energy intensity is sustainable from either the environmental or the cost point of view. However, renewable sources cannot be considered a substitute for chemicals, irrigation etc., if agricultural productivity is to be maintained. Rather, a combination of different energy sources is needed in the Indian context to improve productivity and income.

A study of the planning and implementation of development programmes based on alternative and renewable energy resources for achieving self-sufficiency in fuelwood, fodder, pulses and oil seeds was undertaken in a village near Bhopal. A survey to assess the energy use pattern for production agriculture, post-harvest operations, cattle raising and domestic activities, found that deficits existed in respect of fuelwood, fodder supply, pulses and oilseeds. Only production of cereals showed a surplus. There was also scarcity of irrigation water in the village. Action programmes were charted out in each of these areas to remove the deficits.

The implementation of these programmes to make the village self-sufficient has led to better resource utilisation by increased harnessing of solar energy for its conversion to food, fodder, fuel and fibre. In terms of employment generation also, the programmes were reported to be quite successful.

The coverage of renewable energy programmes should be widened to include environmental regeneration and agro-industrial development, in addition to more traditional uses. It would also be preferable to implement rural energy programmes on a watershed basis (the natural boundaries of the village).

A strategy for phased development of renewable energy resources, which gives emphasis to the utilisation of a conventional energy network in the initial stages must be considered. In the second phase, when significant bioenergy supply becomes aveilable, renewable energy sources can be given a more prominent role. Industries which have the potential to use low and medium temperature could be supplied through renewable energy sources. However, all these benefits must be equitably shared so that they are not cornered by the more affluent groups.

Community efforts are needed to overcome the resource constraints by organising groups to manage bioenergy, to assess the bioenergy needs, to explore the avenues for using solar heating devices, wood gasifiers and biogas units, and for income generating activities that will benefit the rural poor.

Methodological Aspects

The workshop also highlighted the need for utilising various methodologies for the management of renewable energy. Survey methods have been used extensively to estimate current patterns of fuel usage in rural areas. At the micro level such as a village or watershed, it is possible to quantify all the major energy and resource flows, in order to identify deficiencies that need to be rectified. Energy flow accounting at the macro level requires sufficient secondary data, which may not be available for non—conventional sources of energy. An alternative approach is the use of simulations or models, whereby the effects of various parameters on energy supply and demand can be explored. They also serve as heuristic devices in the training of energy managers.

Interventions such as Urjagrams or the National Biogass Programme can be evaluated using cost-benefit analysis, technology/impact assessment, or operational research methods. Since acceptance by the target group is a major issue in most technological interventions, the use of sociological or anthropological methods is indicated.

The deliberations at the workshop were fruitful, demonstrating the crucial need for an interdisciplinary perspective in planning and managing renewable energy resources in rural areas.

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